ORDER NO. AD9203070A

Service Manual

Simplified

Stereo Integrated Amplifier

Amplifier

SU-X120

Colour

(K) ..... Black Type

Areas

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	
(GN)	Oceania	

- Please file and use this manual together with the Service Manual for Model No. SU-X102, Order No. AD9103049C8.
- This service manual indicates the main differences between Original SU-X102 (E).

■ LINE-UP OF COMPONENTS

System Name	Unit
SC-X120 (E)	ST-X302LA (E) : Tuner
	SU-X120 (E) : Amplifier
	RS-X120 (EG) : Cassette Deck
	—— : CD Player
	SL-J110R (E) : Turntable
	SB-CS55 (E) : Speaker (Made in PAES)
SC-X120 (EB)	ST-X302LA (EB) : Tuner
	SU-X120 (EB) : Amplifier
	RS-X120 (EG) : Cassette Deck
	SL-PJ28A (EB) : CD Player (Made in MBV)
	SL-J110R (EB) : Turntable
	SB-CS55 (E) : Speaker (Made in PAES)
SC-X120 (EF)	ST-X302LA (EF) : Tuner (Made in PFS)
	SU-X120 (E) : Amplifier
	RS-X120 (EG) : Cassette Deck
	SL-PJ28A (E) : CD Player (Made in MBV)
	SL-J110R (E) : Turntable
	SB-CS55 (E) : Speaker (Made in PAES)

System Name	Unit
SC-X120 (EG)	ST-X302LA (EG) : Tuner
	SU-X120 (EG) : Amplifier
	RS-X120 (EG) : Cassette Deck
	SL-PJ28A (EG) : CD Player (Made in MBV)
	SL-J110R (EG) : Turntable
	SB-CS55 (E) : Speaker (Made in PAES)
SC-X120 (EI)	ST-X302LA (EI) : Tuner (Made in PFS)
	SU-X120 (EG) : Amplifier
	RS-X120 (EG) : Cassette Deck
	SL-PJ28A (EG) : CD Player (Made in MBV)
	SL-J110R (EG) : Turntable
	SB-CS55 (E) : Speaker (Made in PAES)
SC-X120 (GN)	ST-X302LA (GN) : Tuner
	SU-X120 (GN) : Amplifier
	RS-X120 (GC) : Cassette Deck
	SL-PJ28 (GN) : CD Player
	SL-J110R (GN) : Turntable
	SB-CD120 (GC) : Speaker

Technics

■ CHANGE IN REPLACEMENT PARTS LIST

SU-X102 (Pages 30~33, 36 of service manual.)

Ref. No.	Part Number		Description	Remarks
	SU-X102 (E)	**SU-X120 (E, EB, EG, GN)**		
TRANSISTOR(S)				
Q504	——	**2SC3311AQSTA**	TRANSISTOR	(EB)
Q505	——	**2SA1309AQSTA**	TRANSISTOR	(EB)
DIODE(S)				
D501, 502	——	**MA167TA**	DIODE	(EB)
D504	——	**MA4051MTA**	DIODE	(EB)
TRANSFORMER(S)				
T1	RTP1M5E008-V	**RTP1M5B002-V**	POWER TRANSFORMER	⚠ (EB, GN)
FUSE(S)				
F2	XBA2C08TB0	——	FUSE	⚠ (GN)
CONNECTOR(S)				
J551	——	**SJT3213**	CONNECTOR (2P)	(EB) Type (B)
JACK(S)				
JK901	SJS9231-1B	**SJS9234B**	AC INLET	⚠ (GN)
JK902	SJS9333B	**SJS9332B**	AC OUTLET	⚠ (EB)
		——	AC OUTLET	⚠ (GN)
FUSE HOLDER(S)				
FC 3, 4	SJT388	——	FUSE HOLDER	⚠ (GN)
RESISTORS				
R515, 516	——	**ERDS2TJ223T**	RESISTOR ¼ W 22K	(EB)
R517	——	**ERDS2TJ563T**	RESISTOR ¼ W 56K	(EB)
R520	——	**ERDS2TJ153T**	RESISTOR ¼ W 15K	(EB)
R521	——	**ERDS2TJ103T**	RESISTOR ¼ W 10K	(EB)
R522	——	**ERDS1FVJ680T**	RESISTOR ½ W 68	⚠ (EB)
R543	——	**ERDS1FVJ560T**	RESISTOR ½ W 56	⚠ (EB)
CAPACITORS				
C513	——	**ECEA1CKA100B**	CAPACITOR 16 V 10 μ	(EB)
C709	ECEA1HKA2R2B	**ECEA1HKN2R2B**	CAPACITOR 50 V 2.2 μ	
CABINET PARTS				
3	SJP9205-2Y	**SJP9205-2T**	CABINET	
5	SJS9231A	**SJS9234A**	AC INLET COVER	(GN)
6	SJS9333A	**SJS9332A**	AC OUTLET COVER	(EB)
		RJS1A4602	AC OUTLET COVER	(GN)
7	RGR0105K-A1	**RGR0105K-C1**	REAR PANEL	(E)
		RGR0105T-B	REAR PANEL	(EB) Type (A)
		RGR0105F-D1	REAR PANEL	(EB) Type (B)
		RGR0105K-D1	REAR PANEL	(EG)
		RGR0105M-A1	REAR PANEL	(GN)
19	RGU0591A-K	**RGU0591B-K**	BUTTON, SUPER BASS	
20	RFKGUX102E	**RFKGUX120E-K**	FRONT PANEL ASS'Y	
25	——	**REM0020-1**	FAN MOTOR ASS'Y	(EB) Type (A)
		SYE1128-4	FAN MOTOR ASS'Y	(EB) Type (B)
25-1	——	**SHE232-1**	FAN	(EB) Type (A)
		SHE232	FAN	(EB) Type (B)
25-2	——	**SUS271**	SPRING	(EB)
25-3	——	**RMQ0209-K**	FAN CASE	(EB) Type (A)
		SHE233-1	FAN CASE	(EB) Type (B)
25-4	——	**MDN-4RB4MRC**	MOTOR	(EB)
25-5	——	**RMQ0208-K**	CAP	(EB) Type (A)
		SHE234	CAP	(EB) Type (B)
25-6	——	**SJT783**	TERMINAL	(EB) Type (B)
25-7	——	**SJS5215**	CONNECTOR (2P)	(EB) Type (B)
25-8	——	**RMQ0212-K**	TERMINAL CAP	(EB) Type (A)
36	——	**RJS1A7402**	CONNECTOR (2P)	(EB) Type (A)
37	——	**XTBS3+8JFZ1**	SCREW	(EB) Type (A)

ORDER NO. AD9204105A

Service Manual

Amplifier

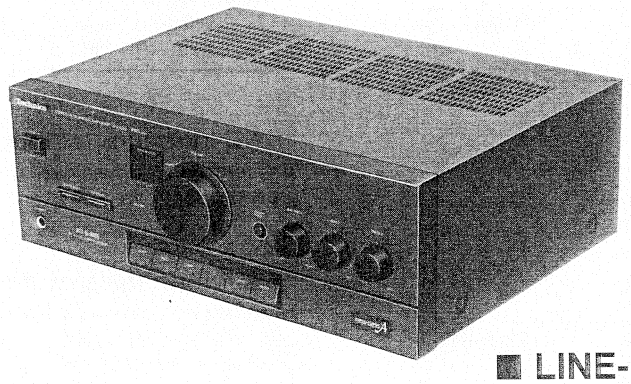
Simplified

Stereo Integrated Amplifier

SU-X120

Colour

(K)	Black Type



Area

Suffix for Model No.	Area	Colour
(GC)	Asia, Latin America, Middle Near East and Africa.	(K)

LINE-UP OF COMPONENTS

System Name	Unit
SC-X120 (GC)	ST-X302LA (GC) : Tuner
	SU-X120 (GC) : Amplifier
	RS-X120 (GC) : Cassette Deck
	SL-PJ28 (GC) : CD Player
	SL-J110R (GC) : Turntable
	SB-CD120 (GC) : Speaker

- **Please file and use this manual together with the Service Manual for Model No. SU-X102 Order No. AD9103049C8.**
- **This service manual indicates the main differences between Original SU-X102 (GC).**

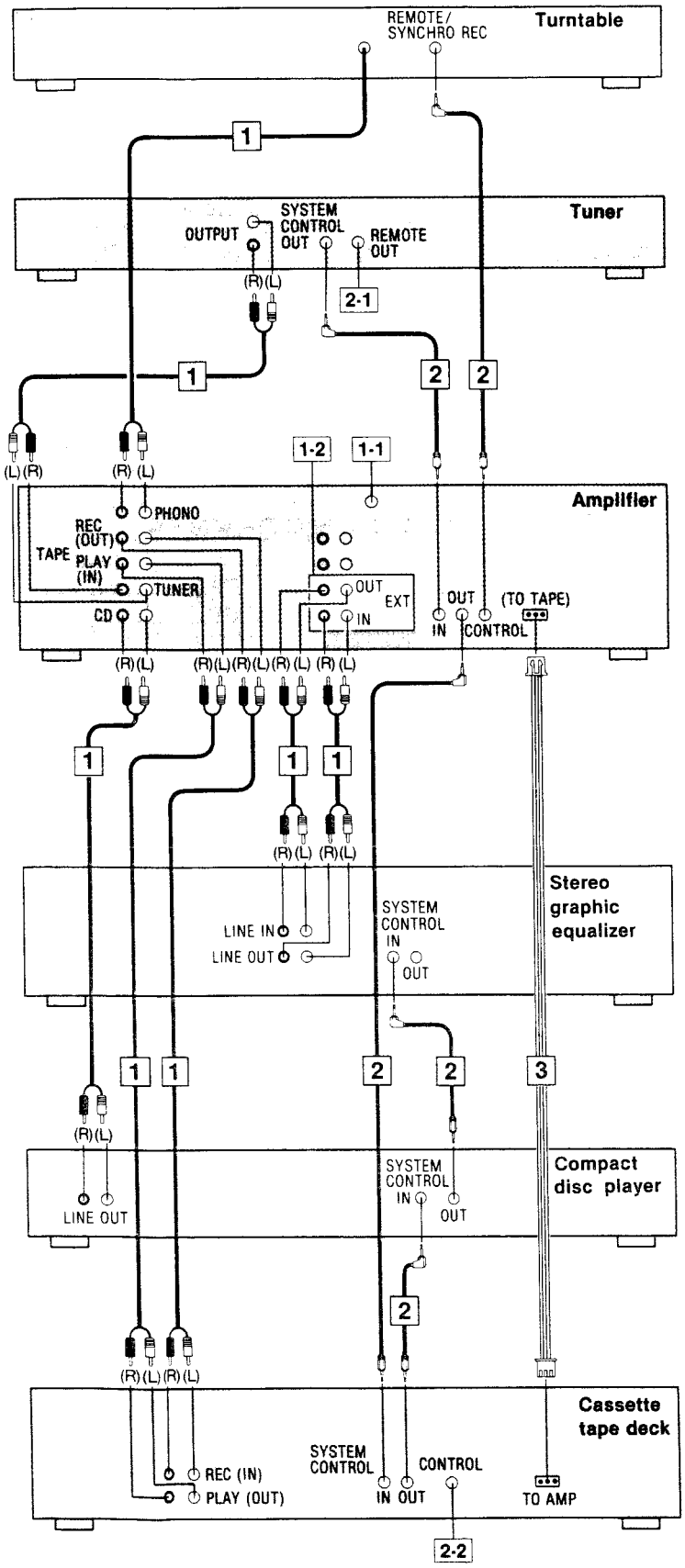
CHANGE IN REPLACEMENT PARTS LIST SU-X102 (Pages 33, 36 of service manual.)

Note: • Important safety notice: Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used .
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Ref. No.	Part Number		Description	Remarks
	SU-X102 (GC)	**SU-X120 (GC)**		
CAPACITORS				
C709	ECEA1HKA2R2B	**ECEA1HKN2R2B**	CAPACITOR 50 V 2.2 µ	
CABINET PARTS				
3	SJP9205-2Y	**SJP9205-2T**	SHORTING PIN	
7	RGR0105L-1	**RGR0105L-A1**	REAR PANEL	
19	RGU0591A-K	**RGU0591B-K**	BUTTON, SUPPER BASS	
20	RFKGUX102E	**RFKGUX120E-K**	FRONT PANEL ASS'Y	
PACKING MATERIALS				
P1	RPG0838	**RPG1208**	PACKING CASE	
P3	SPSD152	——	ACCESSORY BOX	**Deletion**
ACCESSORIES				
A1	RQF1084	——	INSTRUCTIONS MANUAL ASS'Y	**Deletion**
A1-3	RQT0986-G	**RQT1495-G**	INSTRUCTIONS MANUAL	
A2	RJA0004	——	AC POWER SUPPLY CORD	⚠ **Deletion**
A3	SJP9215	——	AC PLUG ADAPTOR	⚠ **Deletion**

Technics

■ CONNECTIONS OF EACH UNIT



Connection diagrams shown are for connections to a Technics hi-fi component system.
Make connections in the numbered sequential order.

1 Connect the stereo connection cables

(included with the turntable, tuner, stereo graphic equalizer, and cassette tape deck).

Stereo connection cable

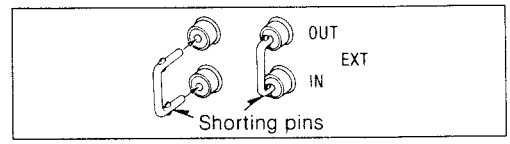
White (L)
Red (R)

1-1 "GND" terminal of the amplifier

This terminal is for use with a turntable which has a ground wire.

1-2 "EXT" terminals of the amplifier

When these terminals are not in use, be sure to insert the "shorting" pins.



2 Connect the L-type cables

(included with the turntable, tuner, stereo graphic equalizer, compact disc player, and cassette tape deck).

2-1 "REMOTE OUT" terminal

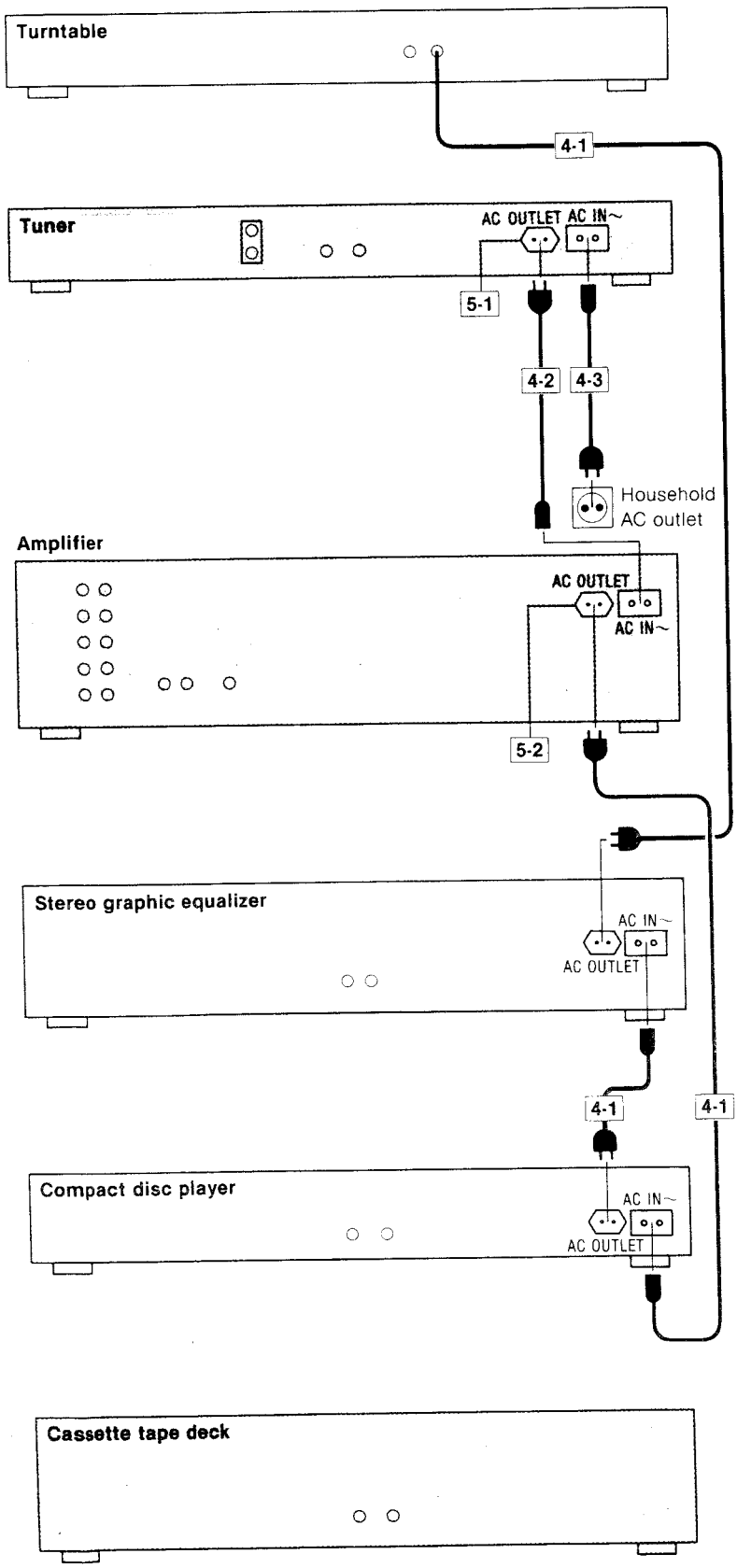
This terminal is used to connect to the "REMOTE IN" terminal of the Technics multi-compact disc player.

2-2 "CONTROL" terminal

Make a connection from this terminal to the "CONTROL" terminal for a cassette deck on a Technics multi compact disc player.
(For detailed information, refer to the operating instructions of the Technics multi compact disc player.)

3 Connect the 3-core flat cable

(included with the cassette tape deck).



4 Connect the AC power supply cords.

4-1 Connect the AC power supply cords.

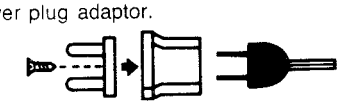
4-2 Connect the AC power supply cord (short for continental Europe).

4-3 Connect the AC power supply cord (long for continental Europe).

Connect this cord only after all other cables have been connected.

For areas except continental Europe

If the power plug will not fit your socket, use the power plug adaptor.



Notes:

- Configuration of the AC outlets and AC power supply cords differ according to area.
- If the compact disc player is not used in combination with these components, connect the AC power supply cord of the stereo graphic equalizer to the AC outlet of the amplifier.

5 "AC OUTLET"

5-1 "SWITCHED" outlet

Power is controlled by the power switch. Audio equipment rated up to 500 W can be connected here.

5-2 "UNSWITCHED" outlet:

Power is always available, regardless of power switch. Audio equipment rated up to 60 W can be connected here.

Note:

If other audio equipments are to be connected to these outlets, make sure that the total power consumption does not exceed the rating of each outlet.

After other units have been connected, tie up the cords in a bundle with a clip, etc. and place them behind the units.

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ORDER NO. AD9203070A8

Service Manual

Simplified

Stereo Integrated Amplifier

Amplifier

SU-X120

Colour

(K)	Black Type

Areas

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	
(GN)	Oceania	

- Please file and use this manual together with the Service Manual for Model No. SU-X102, Order No. AD9103049C8.
- This service manual indicates the main differences between Original SU-X102 (E).

LINE-UP OF COMPONENTS

System Name	Unit	
SC-X120 (E)	ST-X302LA (E)	: Tuner
	SU-X120 (E)	: Amplifier
	RS-X120 (EG)	: Cassette Deck
	——	: CD Player
	SL-J110R (E)	: Turntable
	SB-CS55 (E)	: Speaker (Made in PAES)
SC-X120 (EB)	ST-X302LA (EB)	: Tuner
	SU-X120 (EB)	: Amplifier
	RS-X120 (EG)	: Cassette Deck
	SL-PJ28A (EB)	: CD Player (Made in MBV)
	SL-J110R (EB)	: Turntable
	SB-CS55 (E)	: Speaker (Made in PAES)
SC-X120 (EF)	ST-X302LA (EF)	: Tuner (Made in PFS)
	SU-X120 (E)	: Amplifier
	RS-X120 (EG)	: Cassette Deck
	SL-PJ28A (E)	: CD Player (Made in MBV)
	SL-J110R (E)	: Turntable
	SB-CS55 (E)	: Speaker (Made in PAES)

System Name	Unit	
SC-X120 (EG)	ST-X302LA (EG)	: Tuner
	SU-X120 (EG)	: Amplifier
	RS-X120 (EG)	: Cassette Deck
	SL-PJ28A (EG)	: CD Player (Made in MBV)
	SL-J110R (EG)	: Turntable
	SB-CS55 (E)	: Speaker (Made in PAES)
SC-X120 (EI)	ST-X302LA (EI)	: Tuner (Made in PFS)
	SU-X120 (EG)	: Amplifier
	RS-X120 (EG)	: Cassette Deck
	SL-PJ28A (EG)	: CD Player (Made in MBV)
	SL-J110R (EG)	: Turntable
	SB-CS55 (E)	: Speaker (Made in PAES)
SC-X120 (GN)	ST-X302LA (GN)	: Tuner
	SU-X120 (GN)	: Amplifier
	RS-X120 (GC)	: Cassette Deck
	SL-PJ28 (GN)	: CD Player
	SL-J110R (GN)	: Turntable
	SB-CD120 (GC)	: Speaker

Technics

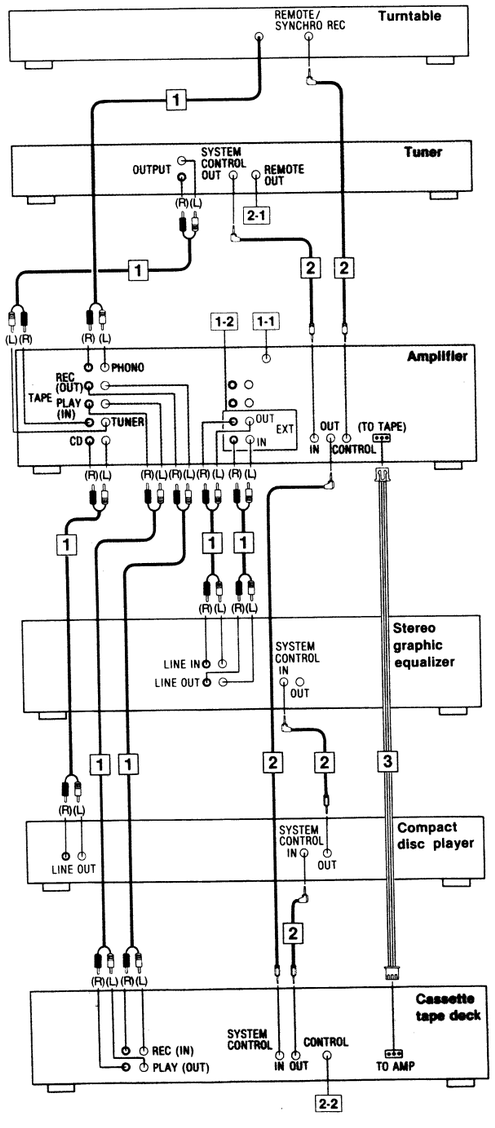
■ CHANGE IN REPLACEMENT PARTS LIST

SU-X102 (Pages 30~33, 36 of service manual.)

Ref. No.	Part Number		Description	Remarks
	SU-X102 (E)	**SU-X120 (E, EB, EG, GN)**		
TRANSISTOR(S)				
Q504	——	**2SC3311AQSTA**	TRANSISTOR	(EB)
Q505	——	**2SA1309AQSTA**	TRANSISTOR	(EB)
DIODE(S)				
D501, 502	——	**MA167TA**	DIODE	(EB)
D504	——	**MA4051MTA**	DIODE	(EB)
TRANSFORMER(S)				
T1	RTP1M5E008-V	**RTP1M5B002-V**	POWER TRANSFORMER	⚠ (EB, GN)
FUSE(S)				
F2	XBA2C08TB0	——	FUSE	⚠ (GN)
CONNECTOR(S)				
J551	——	**SJT3213**	CONNECTOR (2P)	(EB) Type (B)
JACK(S)				
JK901	SJS9231-1B	**SJS9234B**	AC INLET	⚠ (GN)
JK902	SJS9333B	**SJS9332B**	AC OUTLET	⚠ (EB)
		——	AC OUTLET	⚠ (GN)
FUSE HOLDER(S)				
FC 3, 4	SJT388	——	FUSE HOLDER	⚠ (GN)
RESISTORS				
R515, 516	——	**ERDS2TJ223T**	RESISTOR ¼ W 22K	(EB)
R517	——	**ERDS2TJ563T**	RESISTOR ¼ W 56K	(EB)
R520	——	**ERDS2TJ153T**	RESISTOR ¼ W 15K	(EB)
R521	——	**ERDS2TJ103T**	RESISTOR ¼ W 10K	(EB)
R522	——	**ERDS1FVJ680T**	RESISTOR ½ W 68	⚠ (EB)
R543	——	**ERDS1FVJ560T**	RESISTOR ½ W 56	⚠ (EB)
CAPACITORS				
C513	——	**ECEA1CKA100B**	CAPACITOR 16 V 10 μ	(EB)
C709	ECEA1HKA2R2B	**ECEA1HKN2R2B**	CAPACITOR 50 V 2.2 μ	
CABINET PARTS				
3	SJP9205-2Y	**SJP9205-2T**	CABINET	
5	SJS9231A	**SJS9234A**	AC INLET COVER	(GN)
6	SJS9333A	**SJS9332A**	AC OUTLET COVER	(EB)
		RJS1A4602	AC OUTLET COVER	(GN)
7	RGR0105K-A1	**RGR0105K-C1**	REAR PANEL	(E)
		RGR0105T-B	REAR PANEL	(EB) Type (A)
		RGR0105F-D1	REAR PANEL	(EB) Type (B)
		RGR0105K-D1	REAR PANEL	(EG)
		RGR0105M-A1	REAR PANEL	(GN)
19	RGU0591A-K	**RGU0591B-K**	BUTTON, SUPER BASS	
20	RFKGUX102E	**RFKGUX120E-K**	FRONT PANEL ASS'Y	
25	——	**REM0020-1**	FAN MOTOR ASS'Y	(EB) Type (A)
		SYE1128-4	FAN MOTOR ASS'Y	(EB) Type (B)
25-1	——	**SHE232-1**	FAN	(EB) Type (A)
		SHE232	FAN	(EB) Type (B)
25-2	——	**SUS271**	SPRING	(EB)
25-3	——	**RMQ0209-K**	FAN CASE	(EB) Type (A)
		SHE233-1	FAN CASE	(EB) Type (B)
25-4	——	**MDN-4RB4MRC**	MOTOR	(EB)
25-5	——	**RMQ0208-K**	CAP	(EB) Type (A)
		SHE234	CAP	(EB) Type (B)
25-6	——	**SJT783**	TERMINAL	(EB) Type (B)
25-7	——	**SJS5215**	CONNECTOR (2P)	(EB) Type (B)
25-8	——	**RMQ0212-K**	TERMINAL CAP	(EB) Type (A)
36	——	**RJS1A7402**	CONNECTOR (2P)	(EB) Type (A)
37	——	**XTBS3+8JFZ1**	SCREW	(EB) Type (A)

Ref. No.	Part Number		Description	Remarks
	SU-X102 (E)	**SU-X120 (E, EB, EG, GN)**		
PACKING MATERIALS				
P1	RPG0838	**RPG1208**	PACKING CASE	
P3	SPSD152	—	ACCESSORIES BOX	
ACCESSORIES				
A1	RQF1081	—	INSTRUCTIONS MANUAL ASS'Y	
A1-1	RQA0013	**RQX7433ZA**	WARRANTY CARD	(GN)
A1-3	RFKSUX102E-K	**RFKSCX120E-K**	INSTRUCTIONS MANUAL	(E)
		RQT1498-B	INSTRUCTIONS MANUAL	(EB, GN)
		RQT1497-D	INSTRUCTIONS MANUAL	(EG)
A2	SJA187	—	AC POWER SUPPLY CORD	⚠

■ CONNECTIONS OF EACH UNIT



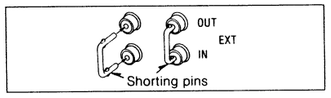
Connection diagrams shown are for connections to a Technics hi-fi component system.
Make connections in the numbered sequential order.

1 Connect the stereo connection cables (included with the turntable, tuner, stereo graphic equalizer, and cassette tape deck).

Stereo connection cable
White (L)
Red (R)

1-1
"GND" terminal of the amplifier
This terminal is for use with a turntable which has a ground wire.

1-2
"EXT" terminals of the amplifier
When these terminals are not in use, be sure to insert the "shorting" pins (included).



2 Connect the L-type cables (included with the turntable, tuner, stereo graphic equalizer, compact disc player, and cassette tape deck).

2-1
"REMOTE OUT" terminal
This terminal is used to connect to the "REMOTE IN" terminal of the Technics multi-compact disc player (not included).

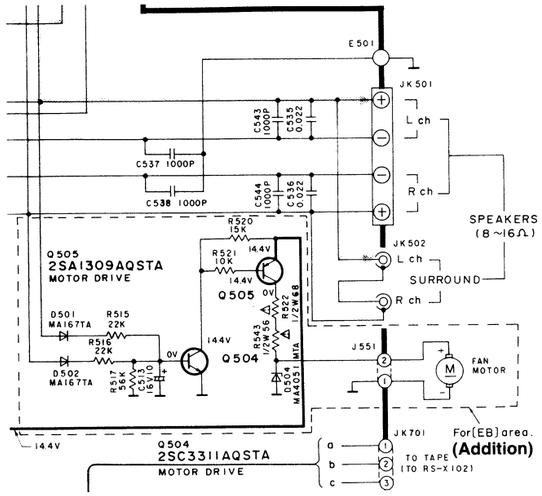
2-2
"CONTROL" terminal
Make a connection from this terminal to the "CONTROL" terminal for a cassette deck on a Technics multi compact disc player (SL-PK26).
(For detailed information, refer to the operating instructions of the Technics multi compact disc player.)

3 Connect the 3-core flat cable (included with the cassette tape deck).

■ Connect the AC power supply cords and AC outlet
(See page 3 of service manual RS-X120, Order No. AD9203066A8.)

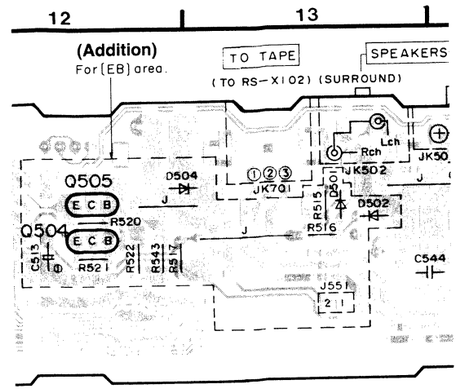
■ SCHEMATIC DIAGRAM

(EB) area only
SU-X102 (Page 18 of service manual.)



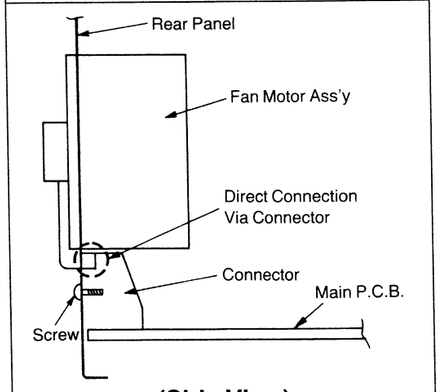
■ PRINTED CIRCUIT BOARD

(EB) area only
SU-X102 (Page 22 of service manual)

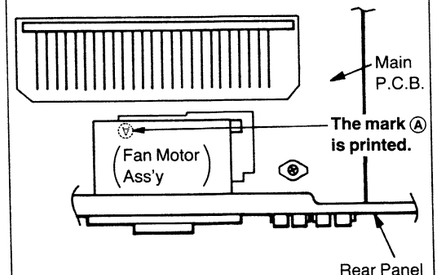


●There are two types of the fan motor, i.e: Types A and B.
Type A...The fan motor terminal is a connector type.
The "mark Ⓐ" is printed on the main P.C.B. of type A. (Refer to the diagram below.)
Type B...The fan motor terminal is a lead wire type.
Refer to the diagram below to distinguish type A from type B.

Type (A)

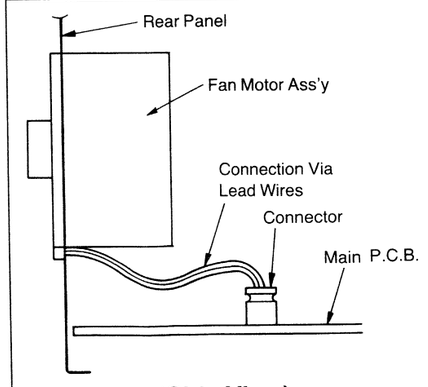


(Side View)

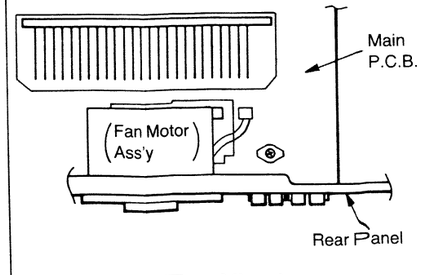


(Top View)

Type (B)



(Side View)

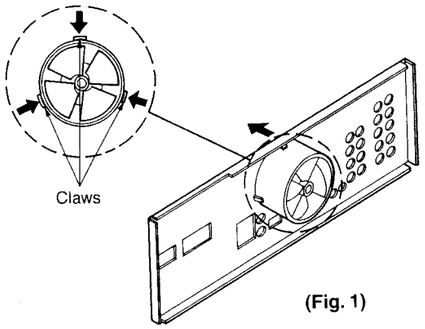


(Top View)

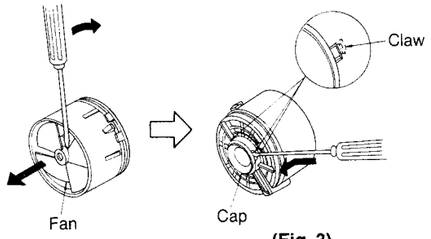
■ DISASSEMBLY INSTRUCTIONS

(EB) area only

Ref No. 13	Removal of the Fan Motor Ass'y (Type A)
Procedure 1→7→13	

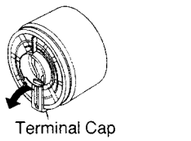


(Fig. 1)

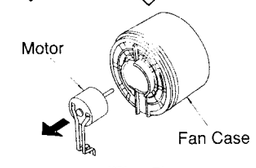


(Fig. 2)

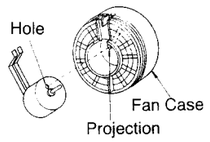
(Fig. 3)



(Fig. 4)



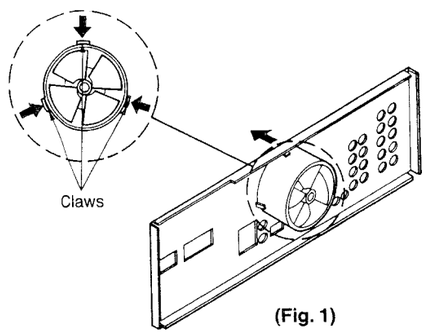
(Fig. 5)



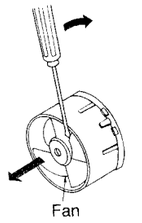
(Fig. 6)

1. Release the 3 claws. (See Fig. 1.)
2. Insert a screwdriver at the root of the fan. Force it out of the motor shaft. (See Fig. 2.)
3. Remove the cap by using ⊖ screwdriver. (See Fig. 3.)
4. Remove the terminal cap in the direction of arrow. (See Fig. 4.)
5. Remove the motor from the fan case. (See Fig. 5.)
6. When mounting the motor, align the fan casing's projection with the hole of the motor. (See Fig. 6.)

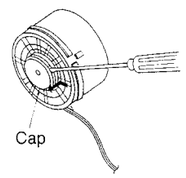
Ref No. 13	Removal of the Fan Motor Ass'y (Type B)
Procedure 1→7→13	



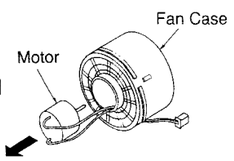
(Fig. 1)



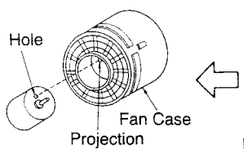
(Fig. 2)



(Fig. 3)



(Fig. 4)

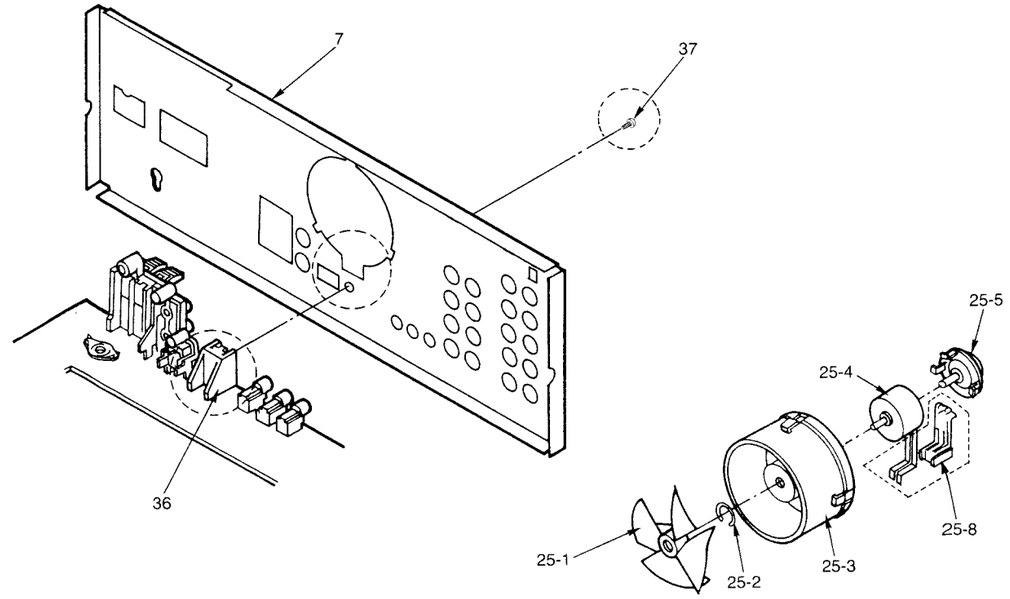


(Fig. 5)

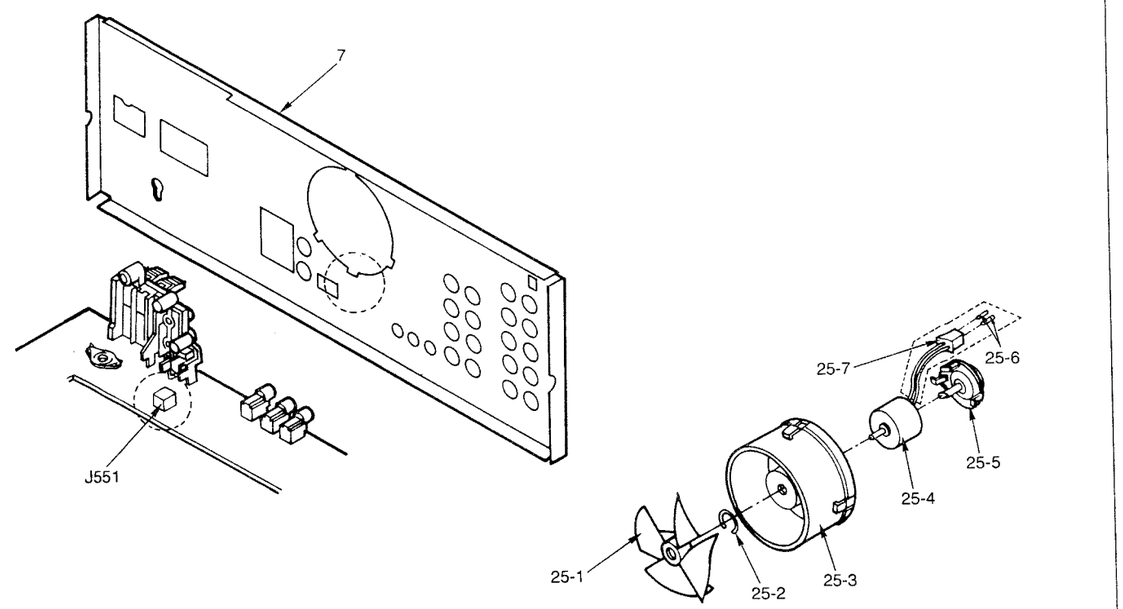
1. Remove the 1 connector (J551).
2. Release the 3 claws. (See Fig. 1.)
3. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft. (See Fig. 2.)
4. Remove the cap by using ⊖ screwdriver. (See Fig. 3.)
5. Remove the motor from the fan casing. (See Fig. 4.)
6. When mounting the motor fan, align the fan casing's projection with the hole of the motor. (See Fig. 5.)

■ CABINET PARTS LOCATION (EB) area only

(Type A)



(Type B)

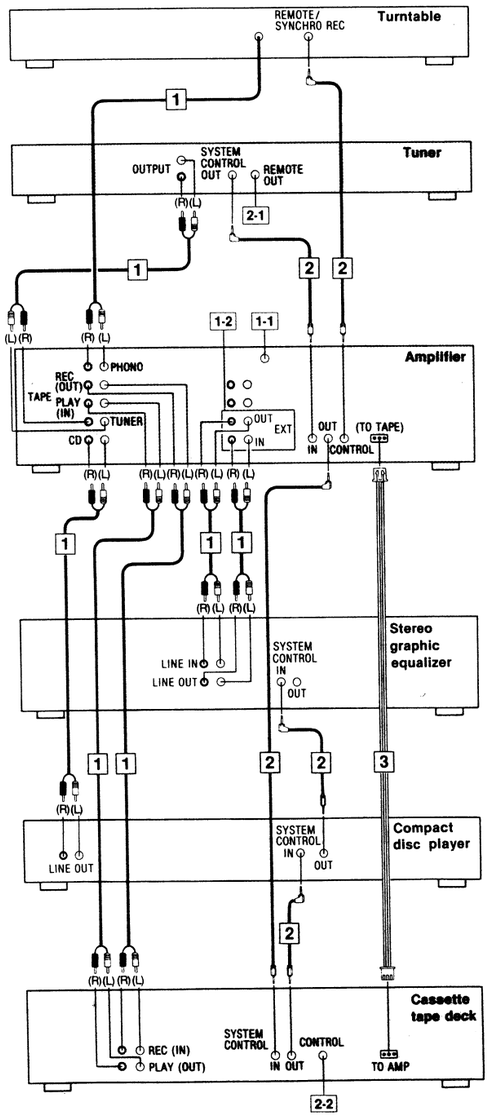


Note: The different parts between type A and type B are enclosed by the dot lines in the above diagrams.

Printed in Japan
F920311500FF/YU/TN

Ref. No.	Part Number		Description	Remarks
	SU-X102 (E)	**SU-X120 (E, EB, EG, GN)**		
PACKING MATERIALS				
P1	RPG0838	**RPG1208**	PACKING CASE	
P3	SPSD152	—	ACCESSORIES BOX	
ACCESSORIES				
A1	RQF1081	—	INSTRUCTIONS MANUAL ASS'Y	
A1-1	RQA0013	**RQX7433ZA**	WARRANTY CARD	(GN)
A1-3	RFKSUX102E-K	**RFKSCX120E-K**	INSTRUCTIONS MANUAL	(E)
		RQT1498-B	INSTRUCTIONS MANUAL	(EB, GN)
		RQT1497-D	INSTRUCTIONS MANUAL	(EG)
A2	SJA187	—	AC POWER SUPPLY CORD	⚠

■ CONNECTIONS OF EACH UNIT



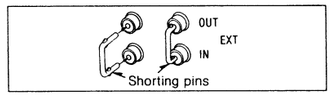
Connection diagrams shown are for connections to a Technics hi-fi component system.
Make connections in the numbered sequential order.

1 Connect the stereo connection cables (included with the turntable, tuner, stereo graphic equalizer, and cassette tape deck).

Stereo connection cable
White (L)
Red (R)

1-1
"GND" terminal of the amplifier
This terminal is for use with a turntable which has a ground wire.

1-2
"EXT" terminals of the amplifier
When these terminals are not in use, be sure to insert the "shorting" pins (included).



2 Connect the L-type cables (included with the turntable, tuner, stereo graphic equalizer, compact disc player, and cassette tape deck).

2-1
"REMOTE OUT" terminal
This terminal is used to connect to the "REMOTE IN" terminal of the Technics multi-compact disc player (not included).

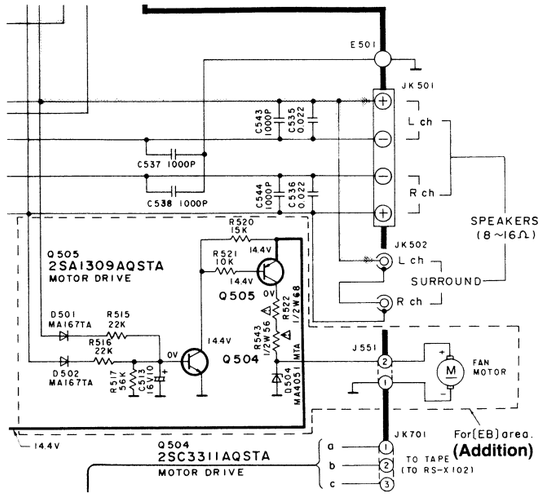
2-2
"CONTROL" terminal
Make a connection from this terminal to the "CONTROL" terminal for a cassette deck on a Technics multi compact disc player (SL-PK26).
(For detailed information, refer to the operating instructions of the Technics multi compact disc player.)

3 Connect the 3-core flat cable (included with the cassette tape deck).

■ Connect the AC power supply cords and AC outlet
(See page 3 of service manual RS-X120, Order No. AD9203066A8.)

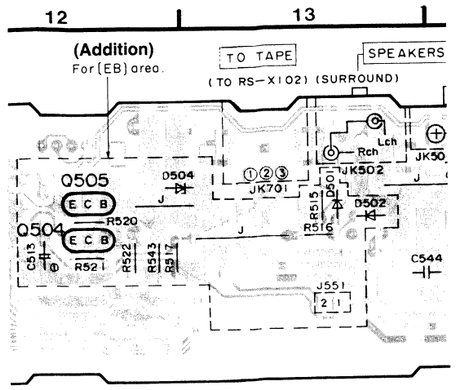
■ SCHEMATIC DIAGRAM

(EB) area only
SU-X102 (Page 18 of service manual.)

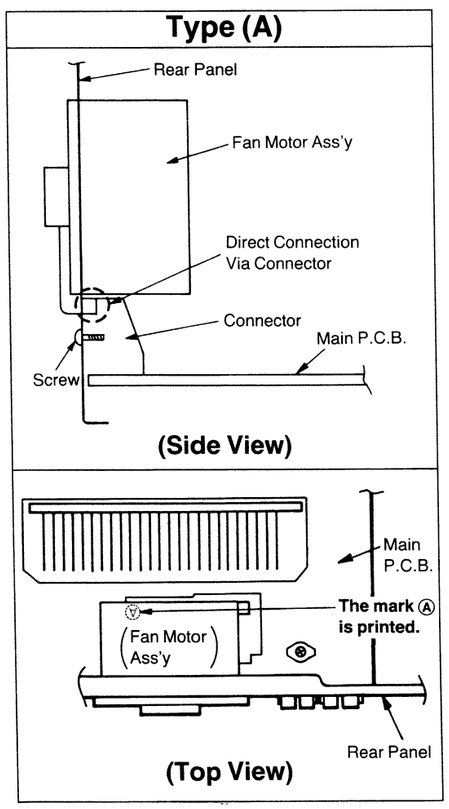


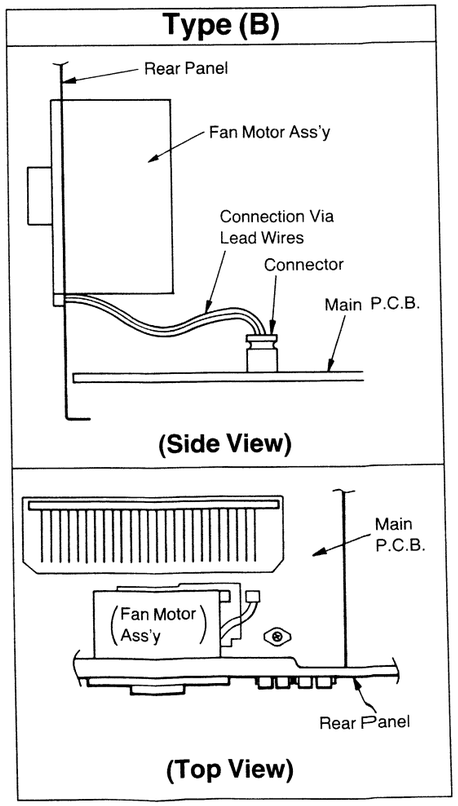
■ PRINTED CIRCUIT BOARD

(EB) area only
SU-X102 (Page 22 of service manual)



●There are two types of the fan motor, i.e: Types A and B.
Type A...The fan motor terminal is a connector type.
The "mark Ⓐ" is printed on the main P.C.B. of type A. (Refer to the diagram below.)
Type B...The fan motor terminal is a lead wire type.
Refer to the diagram below to distinguish type A from type B.

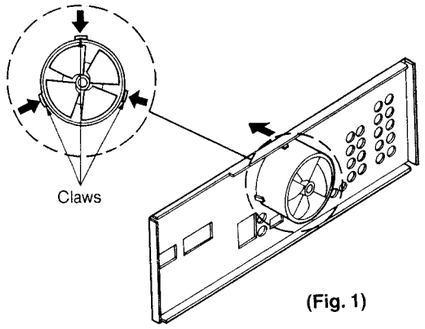




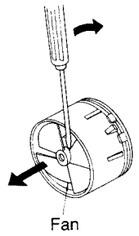
■ DISASSEMBLY INSTRUCTIONS

(EB) area only

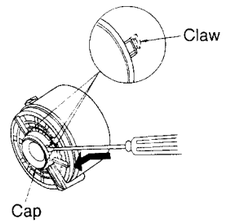
Ref No. 13	Removal of the Fan Motor Ass'y (Type A)
Procedure 1→7→13	



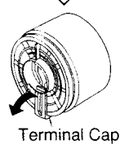
(Fig. 1)



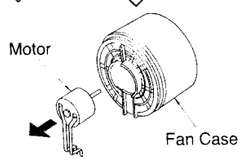
(Fig. 2)



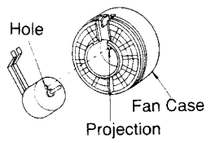
(Fig. 3)



(Fig. 4)



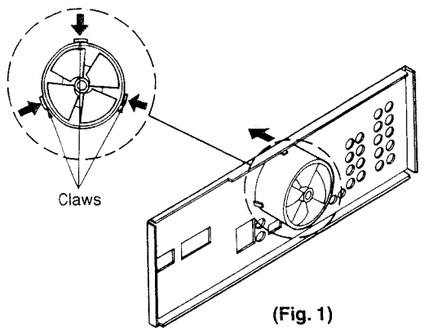
(Fig. 5)



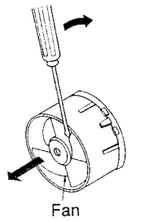
(Fig. 6)

1. Release the 3 claws. (See Fig. 1.)
2. Insert a screwdriver at the root of the fan. Force it out of the motor shaft. (See Fig. 2.)
3. Remove the cap by using ⊖ screwdriver. (See Fig. 3.)
4. Remove the terminal cap in the direction of arrow. (See Fig. 4.)
5. Remove the motor from the fan case. (See Fig. 5.)
6. When mounting the motor, align the fan casing's projection with the hole of the motor. (See Fig. 6.)

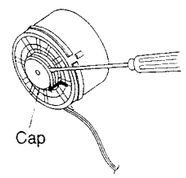
Ref No. 13	Removal of the Fan Motor Ass'y (Type B)
Procedure 1→7→13	



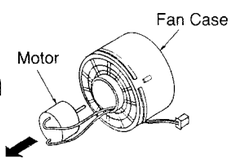
(Fig. 1)



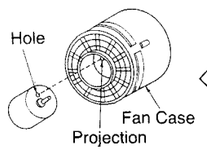
(Fig. 2)



(Fig. 3)



(Fig. 4)

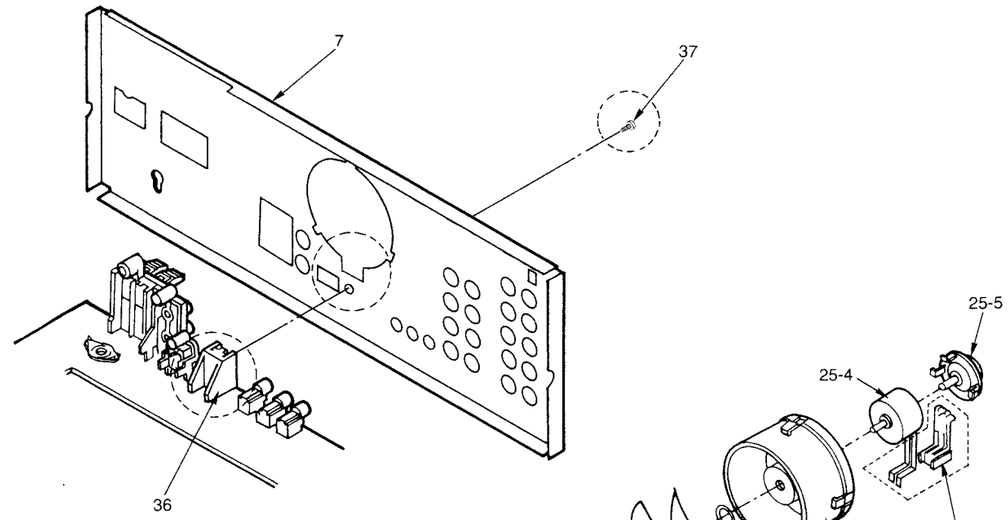


(Fig. 5)

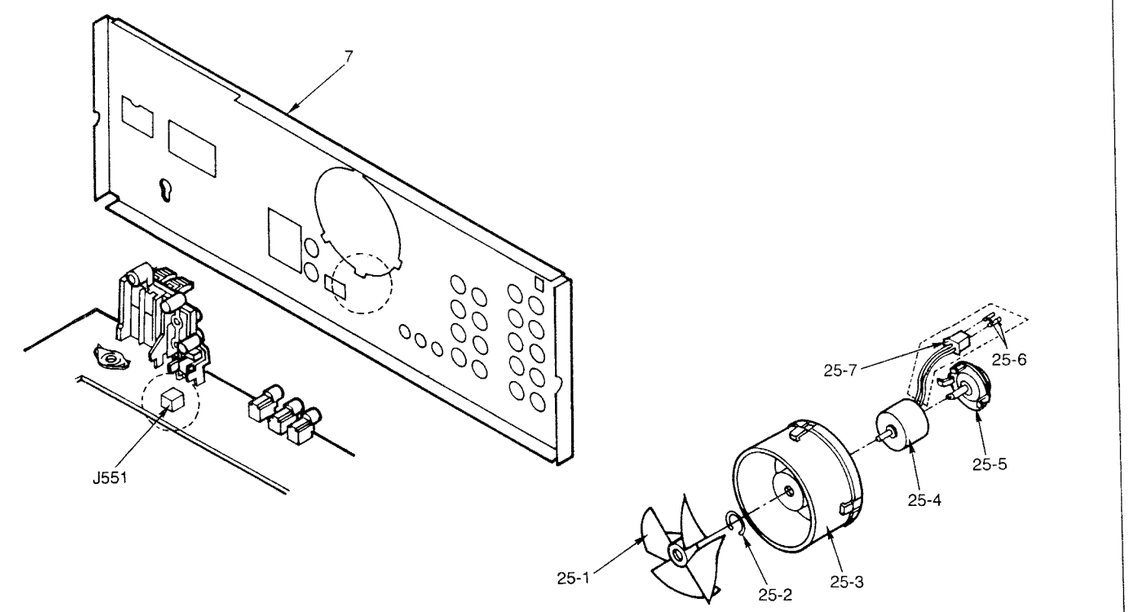
1. Remove the 1 connector (J551).
2. Release the 3 claws. (See Fig. 1.)
3. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft. (See Fig. 2.)
4. Remove the cap by using ⊖ screwdriver. (See Fig. 3.)
5. Remove the motor from the fan casing. (See Fig. 4.)
6. When mounting the motor fan, align the fan casing's projection with the hole of the motor. (See Fig. 5.)

■ CABINET PARTS LOCATION (EB) area only

(Type A)



(Type B)



Note: The different parts between type A and type B are enclosed by the dot lines in the above diagrams.

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F920311500FF/YU/TN

ORDER NO. AD9103049C8

Service Manual

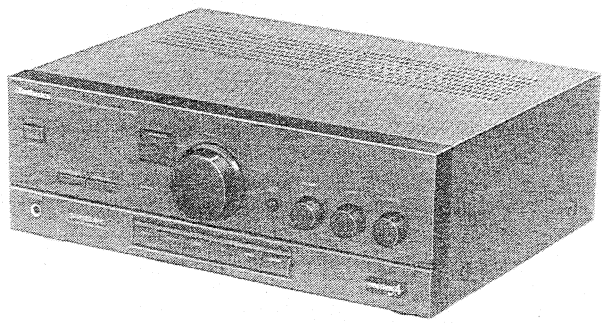
Stereo Integrated Amplifier

Amplifier

SU-X102

Color

(K)	Black Type



Areas

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	
(EG)	F.R. Germany & Italy	
(GC)	Third Region	
(GN)	Oceania	

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

DIN power output	
1 kHz THD: 1 %	2 × 40 W (8 Ω)
Total harmonic distortion	
rated power at 1 kHz	1 % (8 Ω)
Harmonic distortion	
half power at 1 kHz	0.03 % (8Ω)
Residual hum and noise	0.5 mV
Damping factor	30 (8 Ω)
Input sensitivity and impedance	
PHONO	3 mV/47 kΩ
TUNER, TAPE	150 mV/22 kΩ
CD, AUX1, 2	200 mV/22 kΩ
Maximum input voltage (1 kHz, RMS)	
PHONO	100 mV
S/N (rated power 8 Ω)	
PHONO	73 dB (IHF, A: 79 dB)
TUNER, CD, AUX1, 2, TAPE	82 dB (IHF, A: 83 dB)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, CD, AUX1, 2, TAPE	15 Hz~50 kHz (−3 dB)
Tone controls	
BASS	50 Hz, +10 dB~−10 dB
TREBLE	20 kHz, +10 dB~−10 dB
Muting	−20 dB
Super bass	60 Hz, +8 dB
Output voltage	
TAPE REC OUT	150 mV
Channel balance, TUNER 250 Hz~6,300 Hz	±1.0 dB
Channel separation, TUNER 1 kHz	55 dB
Headphones output level and impedance	421 mV/330 Ω
Load impedance	
MAIN	8 Ω~16 Ω
SURROUND	8 Ω~16 Ω

■ GENERAL

Power consumption	230 W
Power supply	
For Continental Europe	AC 50 Hz/60 Hz, 220 V
For Great Britain and Oceania	AC 50 Hz/60 Hz, 230~240 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V
Dimensions (W × H × D)	360 × 129 × 305 mm (14-3/16" × 5-3/32" × 12")
Weight	5.3 kg (11.7 lb.)

Notes:

1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

501.

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■ BEFORE REPAIR

(1) Turn off the power supply. Using a 10Ω, 5 W resistor connect both ends of power supply capacitors (C711, C712, 3300 μF) in order to discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110 V/127 V/220 V/240 V.

Power supply voltage	AC 110 V	AC 120 V	AC 220 V	AC 230 V	AC 240 V
Consumed current 50 Hz	181~424 mA	166~386 mA	96~224 mA	86~200 mA	87~204 mA
Consumed current 60 Hz	161~376 mA	148~346 mA	86~200 mA	75~175 mA	79~185 mA

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:
*No sound is heard when the power is switched ON.
*Sound stops during a performance.
The function of this circuitry is to prevent circuitry damage if, for example, the postive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.
If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON AGAIN.

■ ACCESSORIES

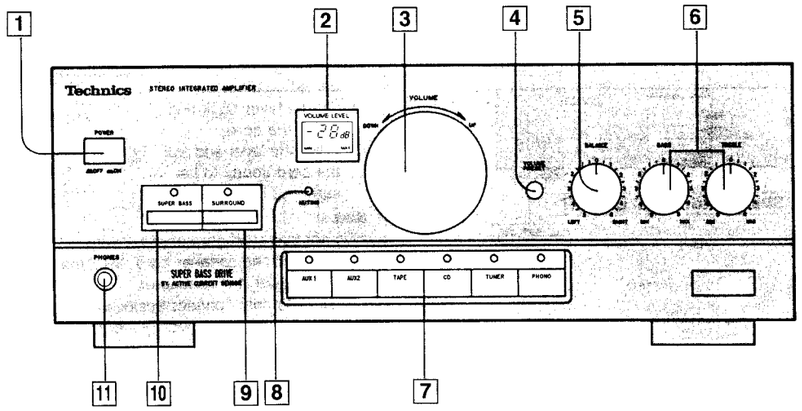
- AC power supply cord 1
  Configuration of AC power supply cord differs according to area.

  SJA187 ..... For (E) (EG) area only.
  SJA173 ..... For (GN) area only.
  SJA188 ..... For (EB) area only.
  RJA0004 ..... For (GC) area only.

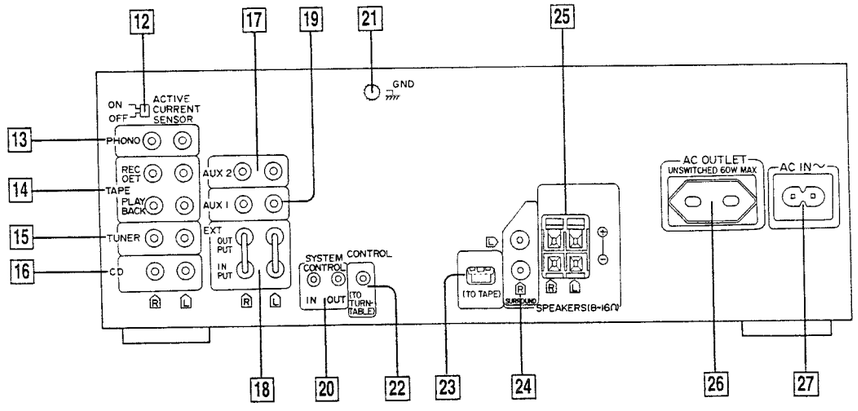
- Attachment AC plug 1

  SJP9215 ..... For (GC) area only.

■ LOCATION OF CONTROLS



1 Power switch (POWER)
2 Volume-level indicator (VOLUME LEVEL)
3 Volume control (VOLUME)
4 Volume preset button (VOLUME PRESET)
5 Balance control (BALANCE)
6 Tone controls (BASS/TREBLE)
7 Input selectors/indicators
8 Muting indicator (MUTING)
9 Surround-sound button/indicator (SURROUND)
10 Super bass button/indicator (SUPER BASS)
11 Headphones jack (PHONES)



12 Active current sensor switch
13 Phono input terminal
14 Tape rec out/playback terminal
15 Tuner input terminal
16 CD input terminal
17 AUX 2 input terminal
18 EXT output/input terminal
19 AUX 1 input terminal
20 System control IN/OUT terminal
21 GND terminal
22 Control terminal (to turntable)
23 Control terminal (to cassette deck)
24 Surround-sound speaker terminal
25 Main speaker terminal
26 AC outlet
27 AC inlet

■ STANDARD OPERATIONS

When listening to music

TREBLE
Adjust the high-frequency sound to the desired tone quality.

BASS
Adjust the low-frequency sound to the desired tone quality.

BALANCE
Adjust the balance of the left/right volume.

VOLUME
Adjust the volume level.

SUPER BASS
Press this button to boost the super-low frequency range. (The indicator will illuminate.)

SURROUND
Set to the "ON" position to activate the surround-sound effect. (The indicator will illuminate.)

Note:
The surround-sound effect is only effective for phono discs, compact discs, tapes that are recorded in stereo, and for FM and other broadcasts that are broadcast in stereo. It has no effect for monaural AM broadcasts, or for any other monaural source.
When listening to a sound source recorded by the surround-sound method, set this switch to the "OFF" position.

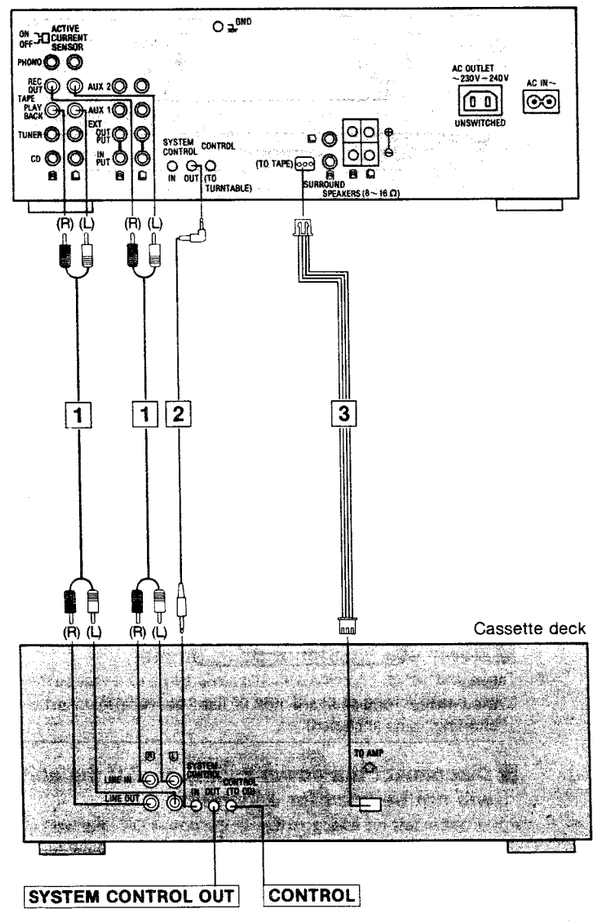
The effect by using surround-sound speaker systems

An effect similar to the dynamic sound of a concert hall

During recording
Operation of controls or switches other than the surround-sound switch has no influence upon recording.

■ CONNECTIONS

To connect the amplifier with the cassette deck



Make connections in the numbered sequence by using the included cables.

Stereo connection cable
White (L)
Red (R)

See the operating instructions of the tuner (ST-X302L) for details.

1 Connect the stereo connection cables.

2 Connect the L-type cable.

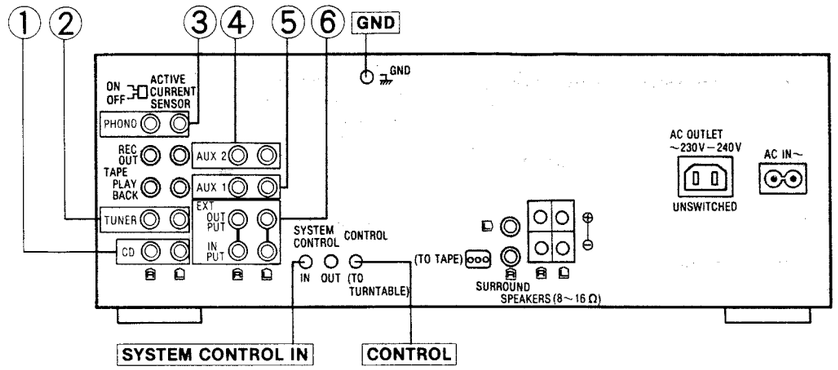
3 Connect the flat cable.

SYSTEM CONTROL OUT
This terminal is used to connect a Technics compact disc player or a Technics stereo graphic equalizer with the "SYSTEM CONTROL IN" terminal.

CONTROL
This terminal is used to connect a Technics multi compact disc player with the "CONTROL" terminal.

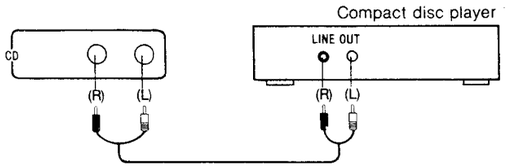
To connect the amplifier with other units

Make connections to each component in the system by using stereo connection cables (not included).



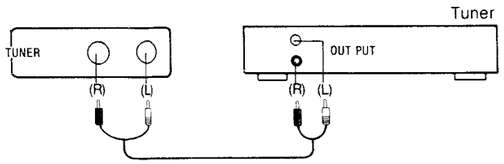
① "CD" terminals

Connect a compact disc player.



② "TUNER" terminals

Connect a tuner.

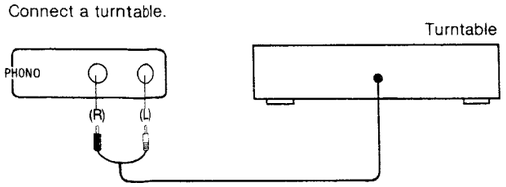


■ "SYSTEM CONTROL IN" terminal

This terminal is used to connect a Technics tuner with the "SYSTEM CONTROL OUT" terminal.

③ "PHONO" terminals

Connect a turntable.



■ "GND" terminal of the amplifier

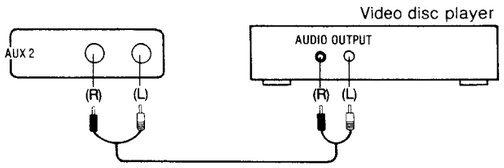
This terminal is for use with a turntable which has a ground wire.

■ "CONTROL (TO TURNTABLE)" terminal

This terminal is used to connect a Technics turntable with the "REMOTE/SYNCHRO REC" terminal.

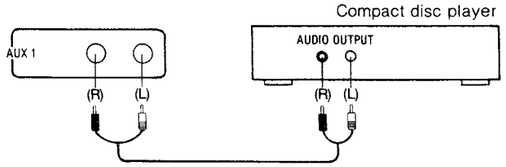
④ "AUX 2" terminals

Connect a video disc player etc. (Only the audio is connectable)



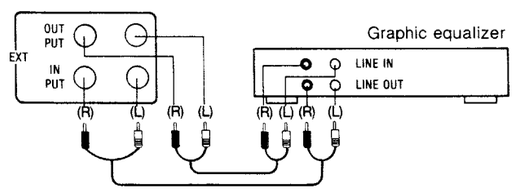
⑤ "AUX 1" terminals

Connect a second compact disc player.

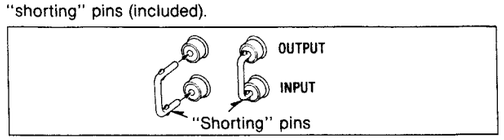


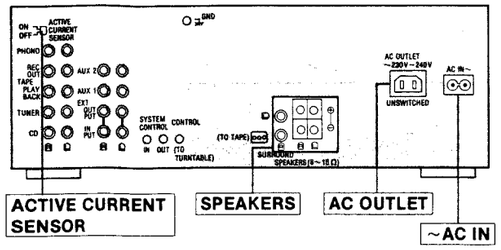
⑥ "EXT" terminals

Connect a graphic equalizer.



Note:
When these terminals are not in use, be sure to insert the "shorting" pins (included).



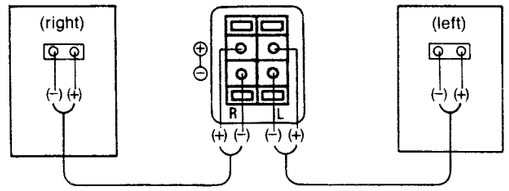


Connection of speaker systems

Two pairs of speaker systems (main, surround-sound) can be connected to the amplifier.
Speaker systems that can be connected to any of the speaker connection terminals of the amplifier are speaker systems with an impedance of 8 to 16 ohms.
Make connections to each speaker system by using speaker cords (not included).

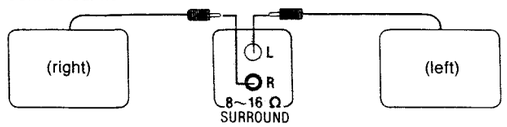
Main speaker systems (not included)

Connect to the "SPEAKER" terminals.



Surround-sound speaker systems (not included)

Connect to the "SURROUND" terminals.
Be sure to connect both speaker systems. If only one side is connected, no sound will be heard.



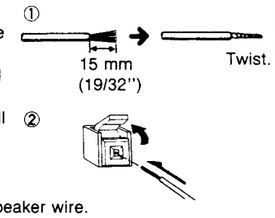
How to use the active current sensor

The selector is used to enjoy powerful super-bass sound.
ON: Switch ON when connecting the Technics system speakers (SB-CS50).
OFF: Switch OFF when connecting speakers other than Technics system speakers.

Note:
When connecting speakers other than system speakers, sound from the speakers may not be heard if the selector is pressed ON, because the protecting circuit on the amplifier becomes active.

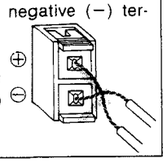
To connect cords to terminals

① Strip off the outer covering, and twist the center conductor.
② Tilt the lever back and insert the cord.
③ Close the lever and pull the cord gently to be sure that it is secure.



Notes:
- Do not use solid core speaker wire.
- To connect the speaker cord, twist the strands on the end. Do not solder the conductor.
- Be sure to only connect positive (+) cords to positive (+) terminals, and negative (–) cords to negative (–) terminals.

Note:
To prevent damage to circuitry, never short-circuit the plus (+) and minus (–) speaker wires.



AC outlet ("AC OUTLET")

Do not connect video equipment (such as a TV, etc.) to the AC outlet of this unit. (This outlet is intended for audio equipment.) Do not exceed the indicated power ratings when connecting to this outlet.

"UNSWITCHED" outlet

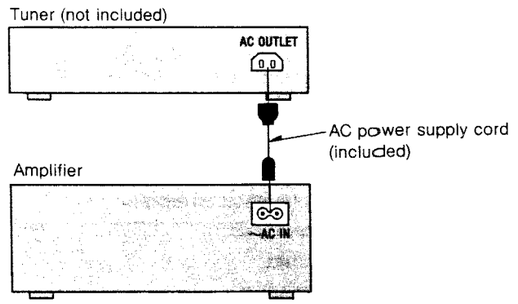
Power is always available, regardless of power switch.
Audio equipment rated up to 60 W can be connected here.

Note:
The configuration of the AC outlet differs according to area.

AC power supply cord

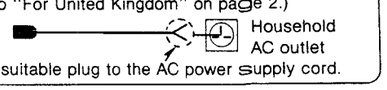
Connect the AC power supply cord (included) after all other cables and cords are connected.

Notes:
- Configuration of the AC outlet and AC power supply cord differs according to area.
- If this unit is not to be connected with the tuner, the cord is to be connected to the household AC outlet.



For United Kingdom

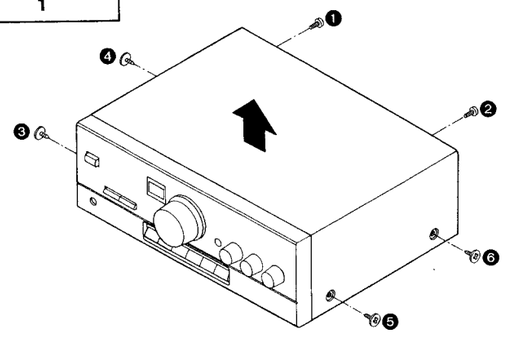
Cut off and dispose of the plug and replace with a suitable plug. (Refer to "For United Kingdom" on page 2.)



■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1 — Removal of the Cabinet

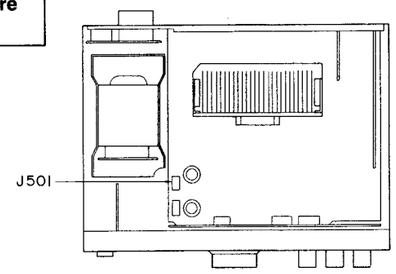
Procedure 1



1. Remove the 6 screws (❶~❻).
2. Remove the cabinet in the direction of the arrow.

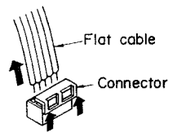
Ref. No. 2 — Removal of the Front Panel Unit

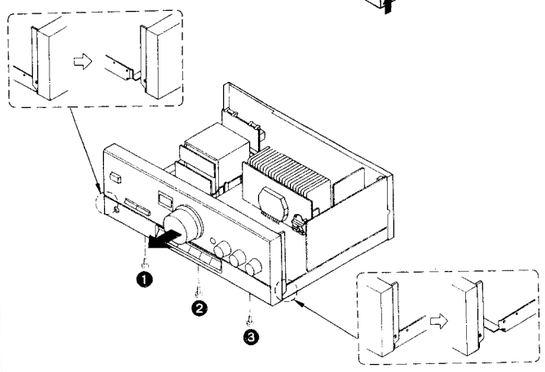
Procedure 1→2



1. Remove the connector (J501).

—Removal of the Connector—

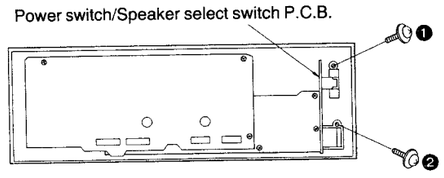




2. Remove the 3 screws (❶~❸).
3. Remove the front panel unit in the direction of the arrow.

Ref. No. 3 — Removal of the Power Switch/Speaker Select Switch P.C.B.

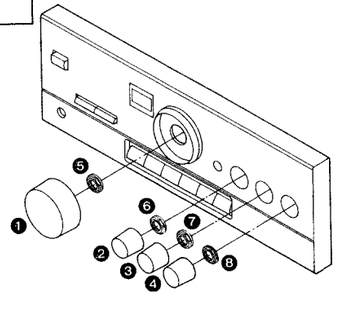
Procedure 1→2→3



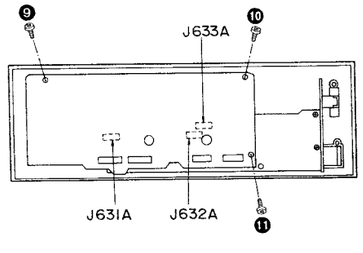
●Remove the 2 screws (❶, ❷).

Ref. No. 4 — Removal of FL Drive P.C.B.

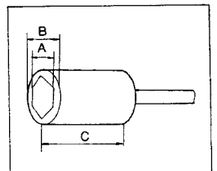
Procedure 1→2→4



1. Remove the 4 knobs (❶~❹).
2. Remove the 4 nuts (❺~❽).



3. Remove the 3 screws (❾~⓫).
4. Remove the 3 connectors (J631A, J632A, J633A).

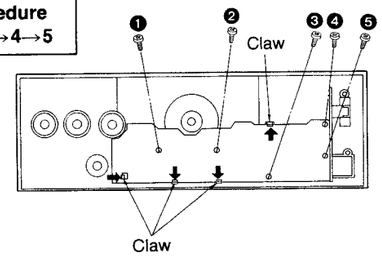


A=11 mm
B=16 mm
C=longer than 22 mm

●Use a wrench of the dimensions shown in the illustration above to remove nuts.

Ref. No. 5 — Removal of the Operation P.C.B.

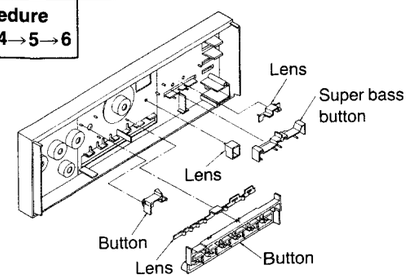
Procedure 1→2→4→5



1. Remove the 5 screws (❶~❺).
2. Release the 4 claws in the direction of arrow.

Ref. No. 6 — Removal of the Operation Buttons

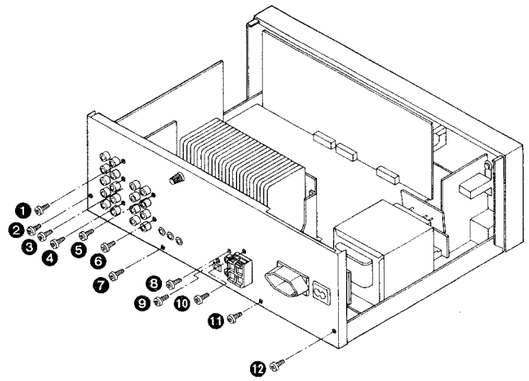
Procedure 1→2→4→5→6



●Pull out the operation buttons and lens.

Ref. No. 7 — Removal of the Rear Panel

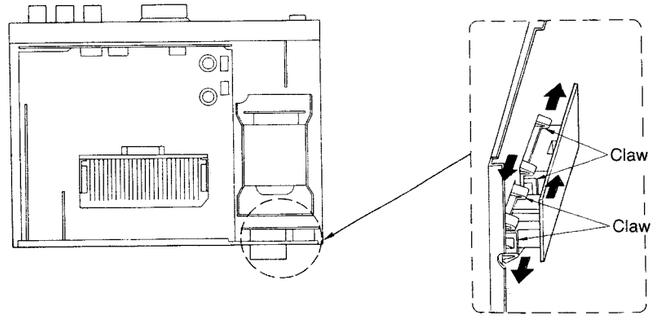
Procedure 1→7



●Remove the 12 screws (❶~⓬).

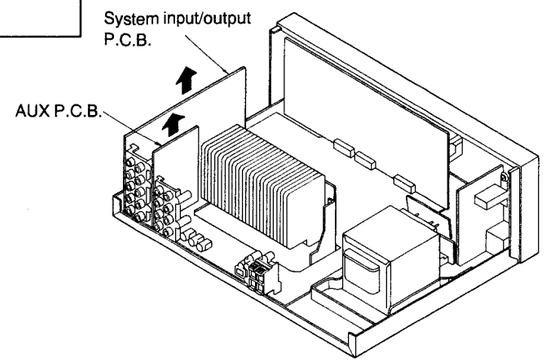
Ref. No. 8 — Removal of the AC OUTLET/AC IN P.C.B.

Procedure 1→8



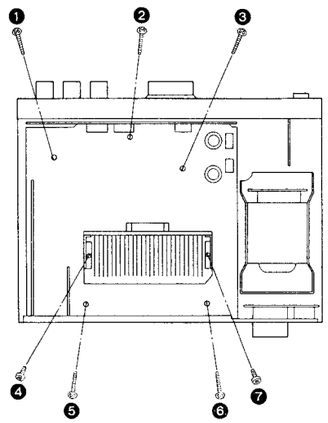
●Release the 4 claws.

Ref. No. 9	Removal of the P.C.B.s
Procedure 1→7→9	

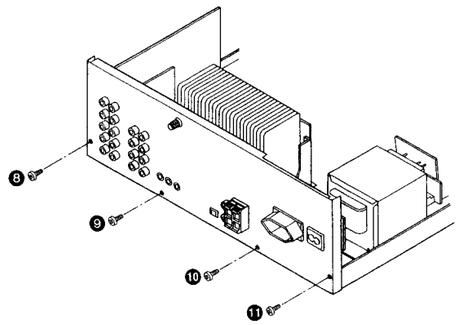


●Remove the P.C.B. in the direction of the arrow.

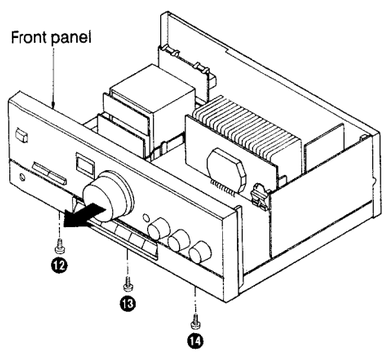
Ref. No. 10	Check of the main P.C.B.
Procedure 1→10	



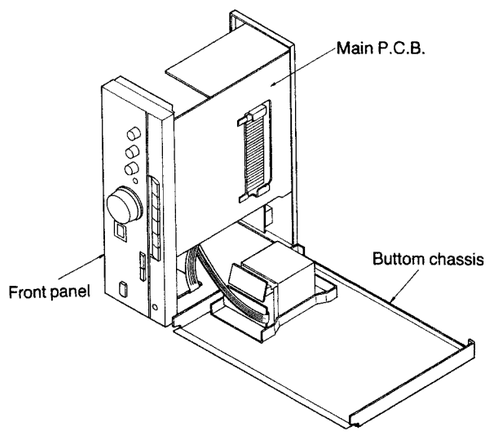
1. Remove the 7 screws (❶~❼).



2. Remove the 4 screws (❽~⓫).

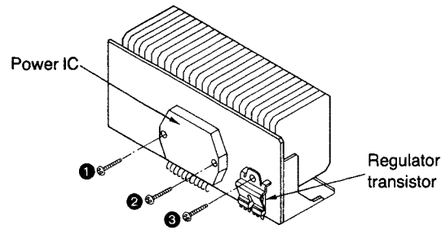


3. Remove the 3 screws (⓬~⓮).
4. Remove the front panel unit in the direction of the arrow.
   *Connect 2 flat cables (J501A, J502).



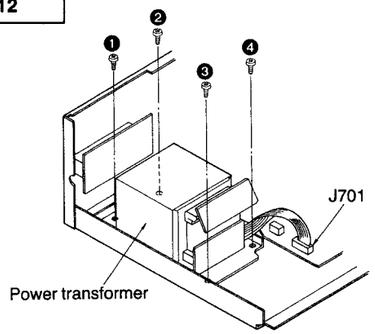
5. Remove the bottom chassis.
6. Reinstall the front panel unit to the main P.C.B.

Ref. No. 11	Removal of the Power IC and Regulator Transistor
Procedure 1→10→11	1. Unsolder the power IC or regulator transistor. 2. Remove the 3 screws (❶~❸).



Note: When mounting the power IC, or regulator transistor apply silicon terminal compound (SZZ0L15) to the rear of the power IC or regulator transistor.

Ref. No. 12	Removal of the Power Transformer
Procedure 1→12	

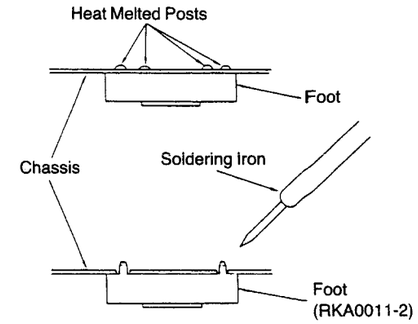


1. Remove the 1 flat cable (J701).
2. Remove the 4 screws (❶~❹).

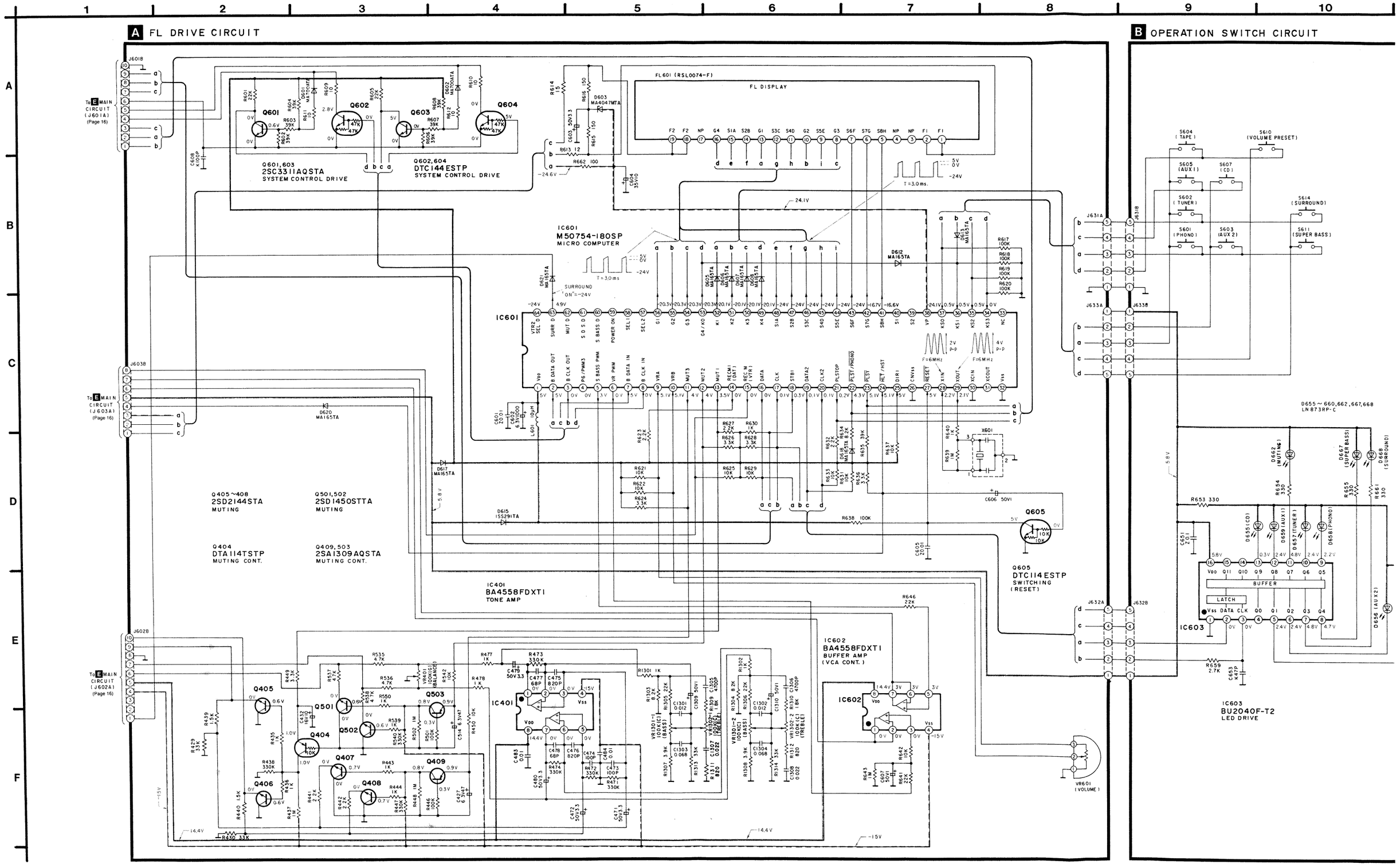
"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

●Replacement of the Foot.

1. Remove the 4 heat melted posts on the chassis with a pair of nippers or similar tool.
2. To replace the foot (RKA0011-2) on the chassis, melt the 4 posts with a soldering iron.



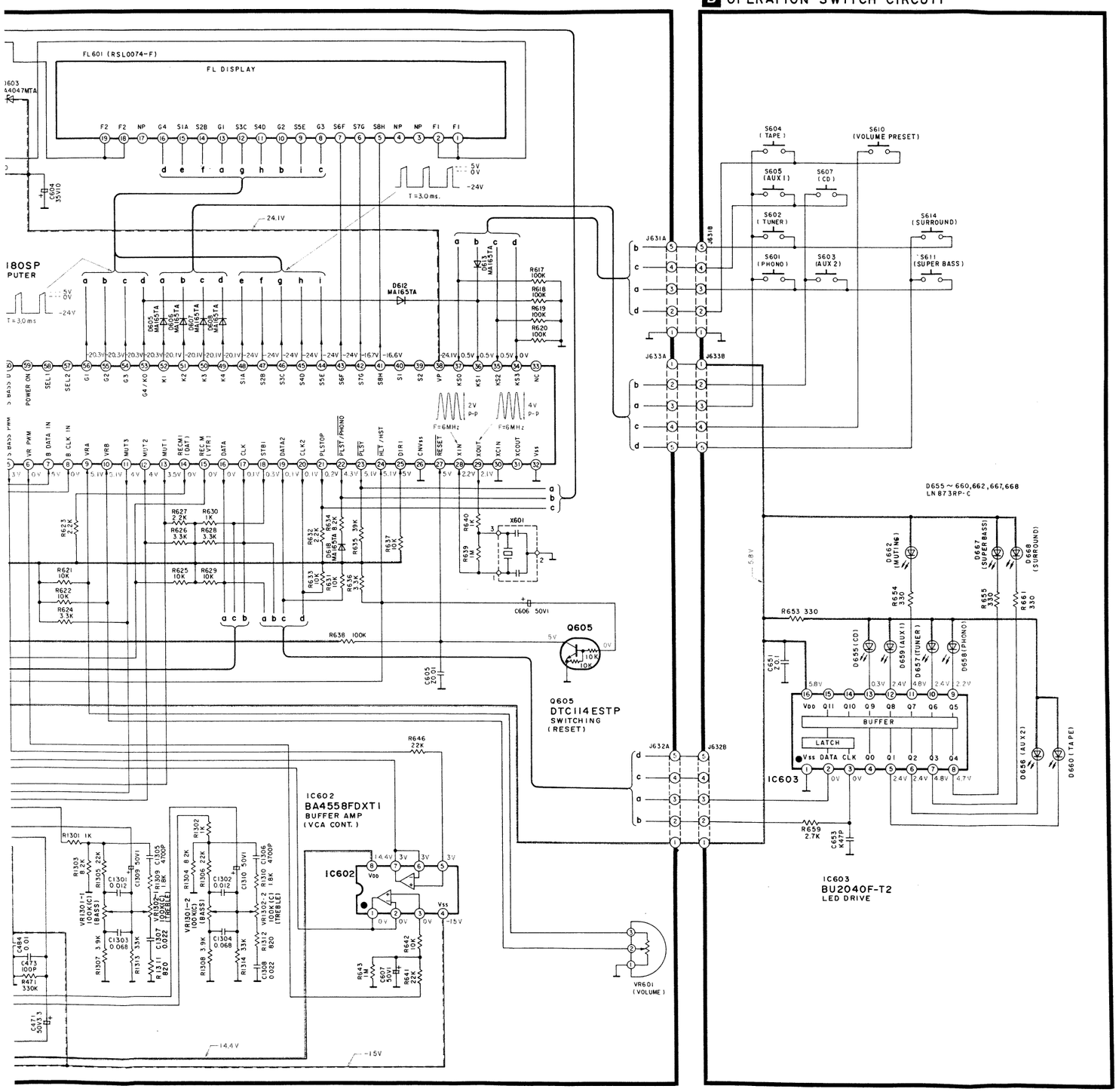
■ SCHEMATIC DIAGRAM



SU-X102

5 6 7 8 9 10 11 12 13 14

B OPERATION SWITCH CIRCUIT



Notes: (This schematic diagram may be modified at any time with the development of new technology.)

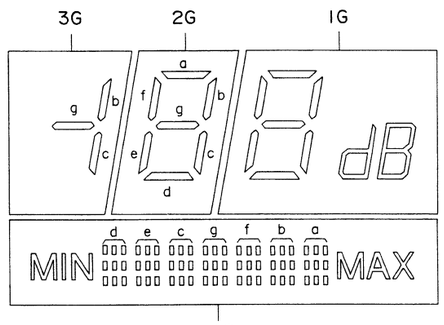
- ●S601 :PHONO input switch.
- ●S602 :TUNER input switch.
- ●S603 :AUX 2 input switch.
- ●S604 :TAPE input switch.
- ●S605 :AUX 1 input switch.
- ●S607 :CD input switch.
- ●S610 :VOLUME PRESET switch.
- ●S611 :SUPER BASS switch.
- ●S614 :SURROUND switch.

CD signal (Lch), Phono signal (Lch)
Positive voltage lines (+)
Negative voltage lines (−)

- ●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- ●Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive may on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

■ DESCRIPTION OF FL PANEL



	4G	3G	2G	1G
P1	a	–	a	a
P2	b	b	b	b
P3	c	c	c	c
P4	d	–	d	d
P5	e	–	e	e
P6	f	–	f	f
P7	g	g	g	g
P8	MIN MAX	–	–	dB

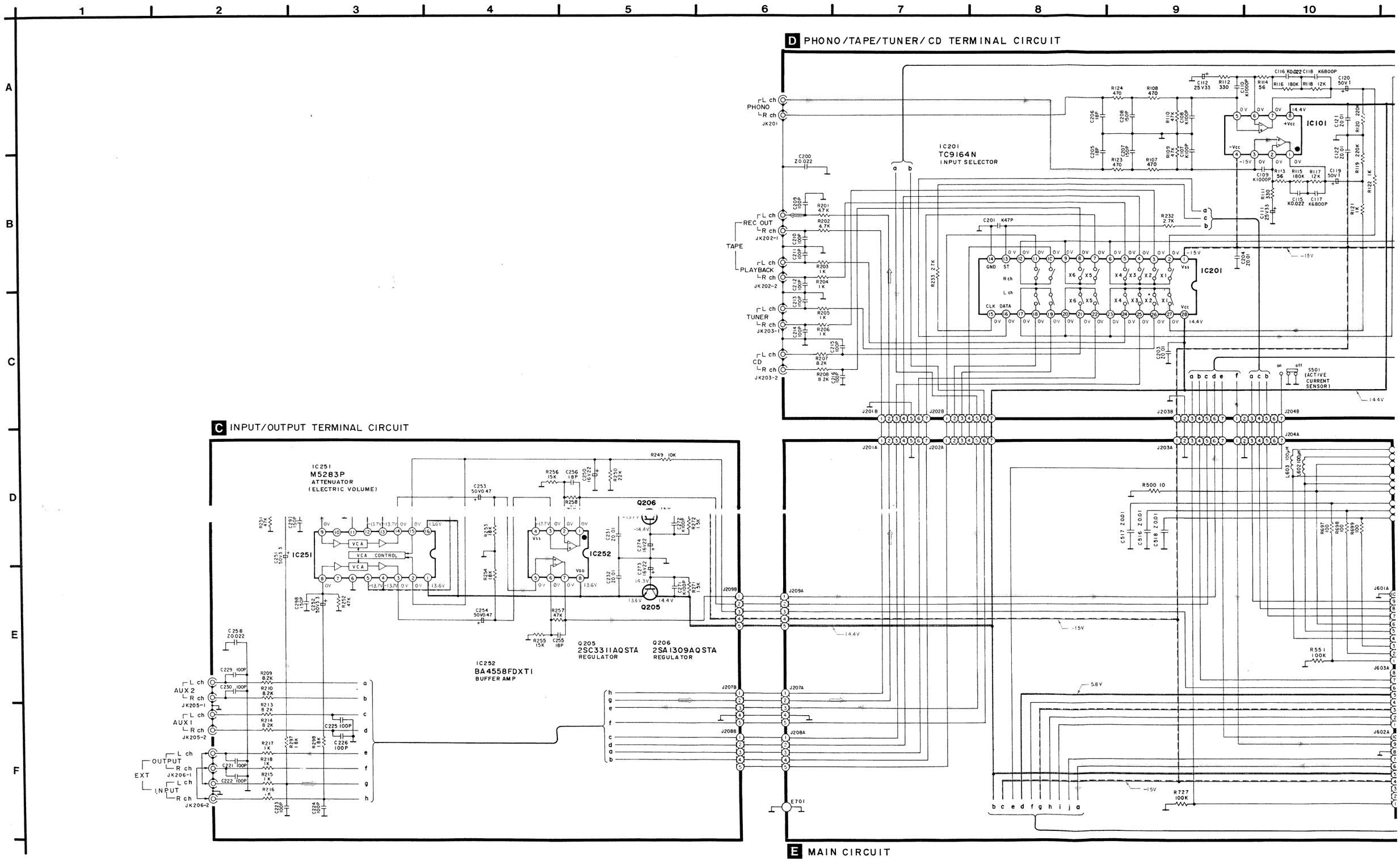
PIN CONNECTION

PIN NO.	19	18	17	16	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01
CONNECTION	F2	F2	NP	4G	P1	P2	3G	P3	P4	2G	P5	1G	P6	P7	P8	NP	NP	F1	F1

Notes: F1, F2 ..... Filament
NP ..... No pin
1G~4G..... Grid

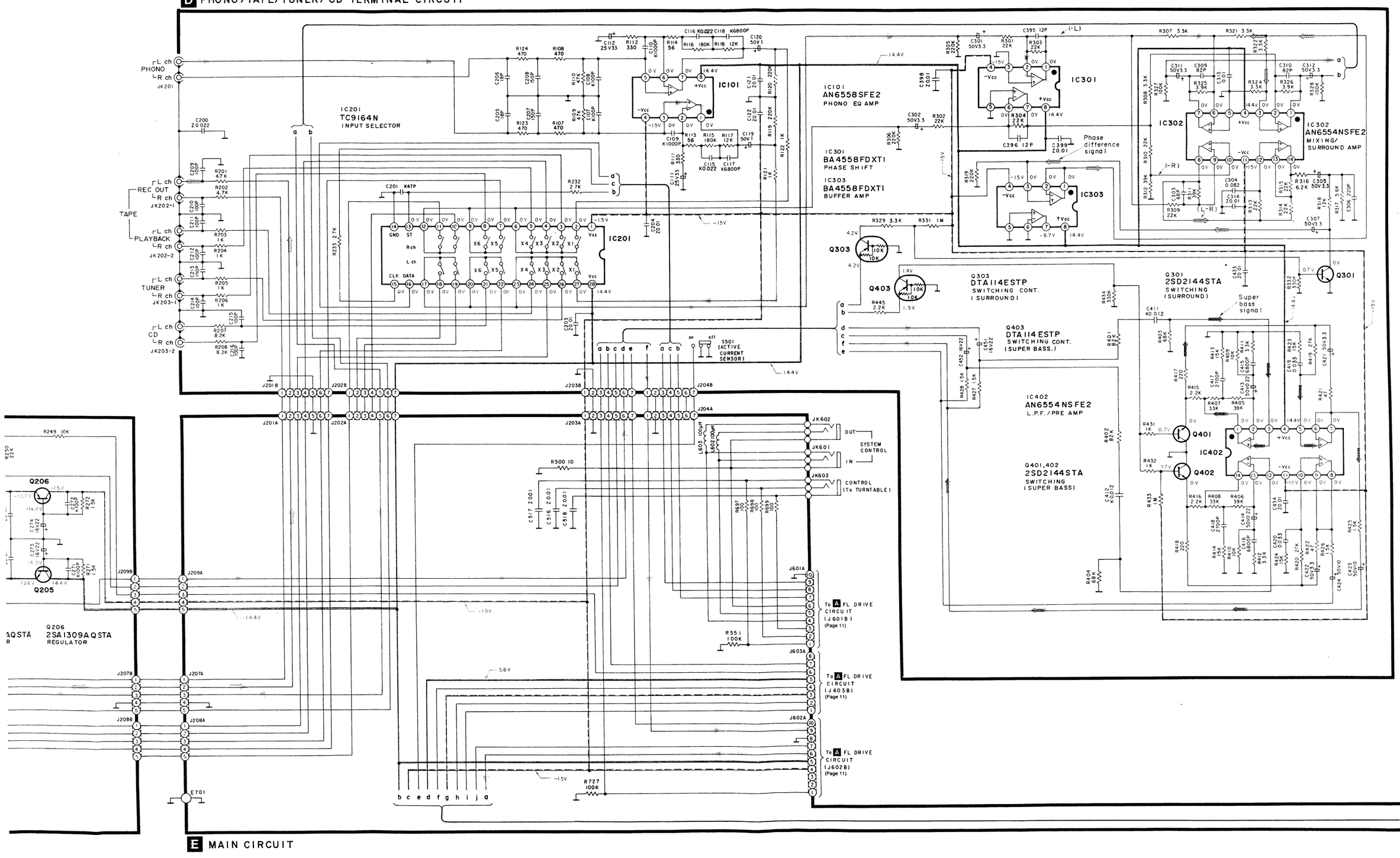
SU-X102 SU-X102

■ SCHEMATIC DIAGRAM



5 6 7 8 9 10 11 12 13 14 15

D PHONO/TAPE/TUNER/CD TERMINAL CIRCUIT



E MAIN CIRCUIT

16 17 18 19 20 21 22 23 24 25

F POWER SWITCH/ HEADPHONES CIRCUIT

G AC IN / AC OUTLET CIRCUIT

IC501 SV13102C POWER AMP

IC504 M5218AP BUFFER AMP

Q1551, 1552 2SC3312RSTA CURRENT STABILIZER

IC503 TC4066B SWITCHING

Q1501~1504 2SA1309AQSTA BIAS CONTROL

Q1505 DTC114ESTP A.C.S. CONTROL

Q1506 DTA114ESTP A.C.S. CONTROL

IC502 AN6554F SIGNAL LEVEL DET.

Q705 KSD471ACYGTA REGULATOR

Q703 2SD1761DEF REGULATOR

Q702 2SB621AQRSTA REGULATOR

Q701 UN4215TA STABILIZER

Q704 2SB1187DEF REGULATOR

Q505 2SA1309AQSTA MOTOR DRIVE

Q504 2SC3311AQSTA MOTOR DRIVE

HEADPHONES

SPEAKERS (8~16Ω)

SURROUND

FAN MOTOR

TO TAPE (TO RS-X102)

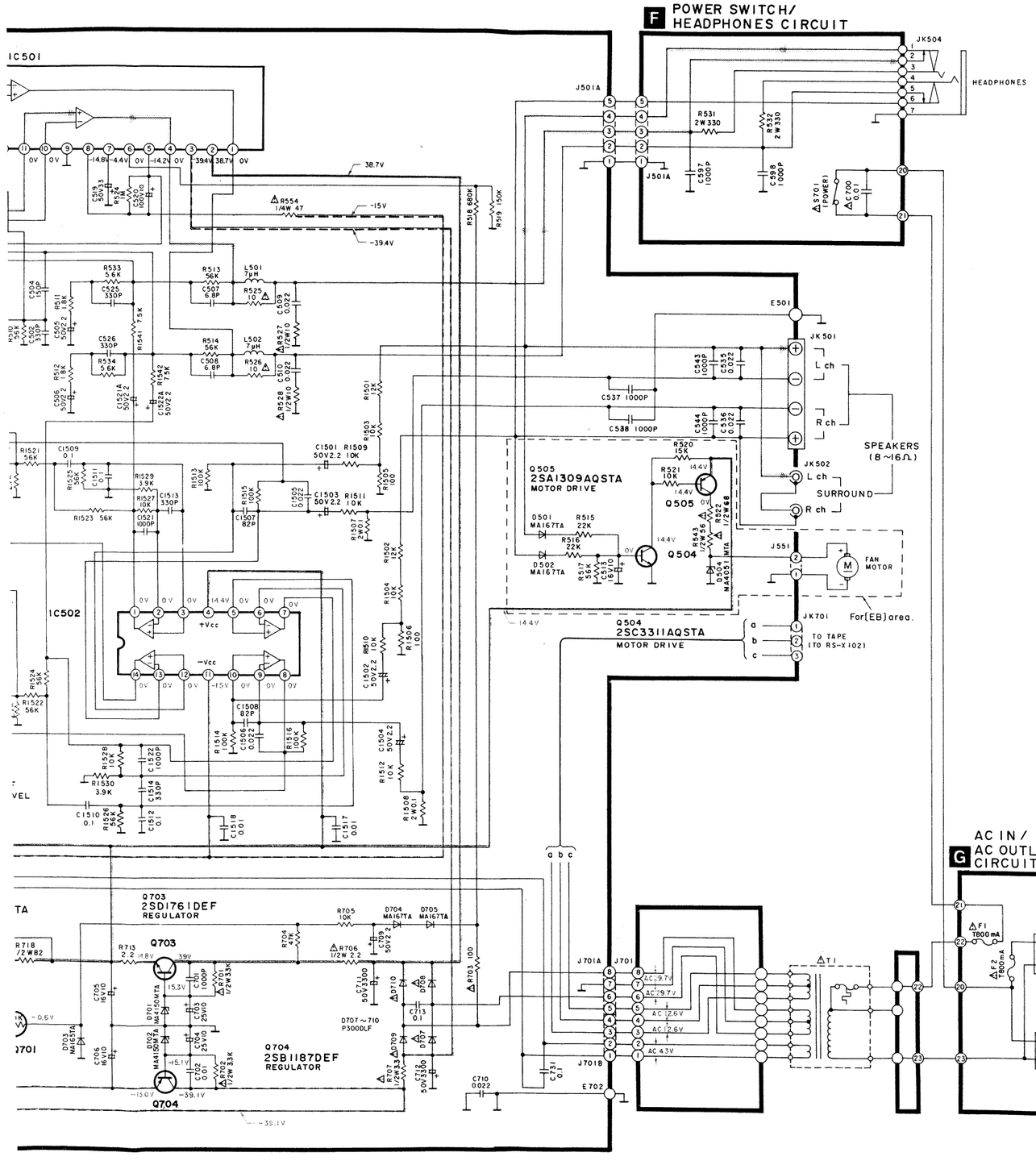
For(EB) area.

AC OUTLET (UNSWITCHED)

AC IN 230V

(230V--(E,EG) 230~240V--(EB) 50/60Hz)

21 22 23 24 25 26 27 28 29 30



Notes: (This schematic diagram may be modified at any time with the development of new technology.)

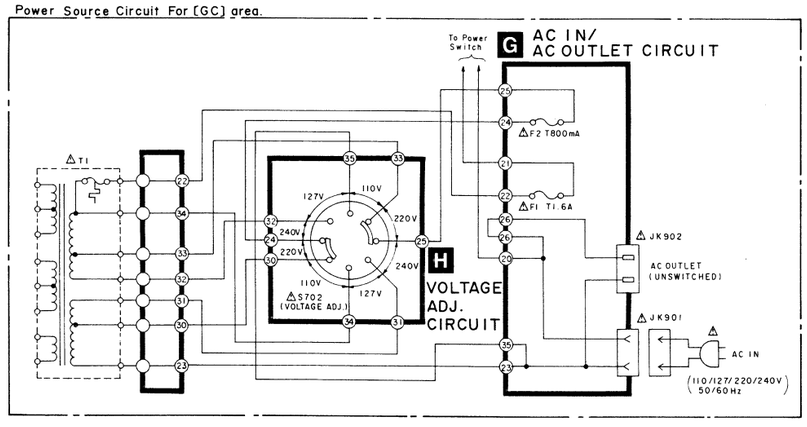
- **•S501** : Active sensor switch in **"OFF"** position.
- **•S701** : POWER switch in **"ON"** position.
- **•S702** : Voltage select switch in **"220 V"** position. [for (GC) only]

CD signal (Lch), Phono signal (Lch)
Positive voltage lines (+)
Negative voltage lines (−)
Super bass signal
Phase difference signal
Recording signal

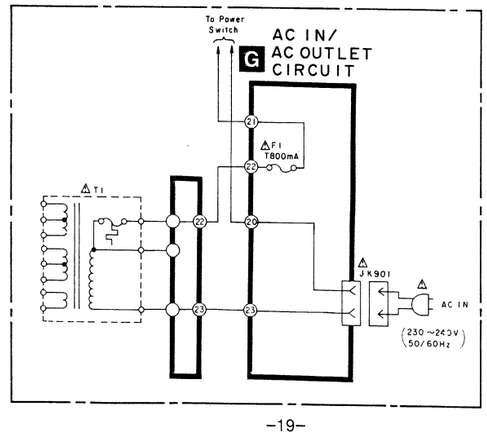
- •Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- •Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

•Caution!
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
•Cover the parts boxes made of plastics with aluminum foil.
•Ground the soldering iron.
•Put a conductive may on the work table.
•Do not touch the legs of IC or LSI with the fingers directly.

Power Source Circuit For [GC] area.

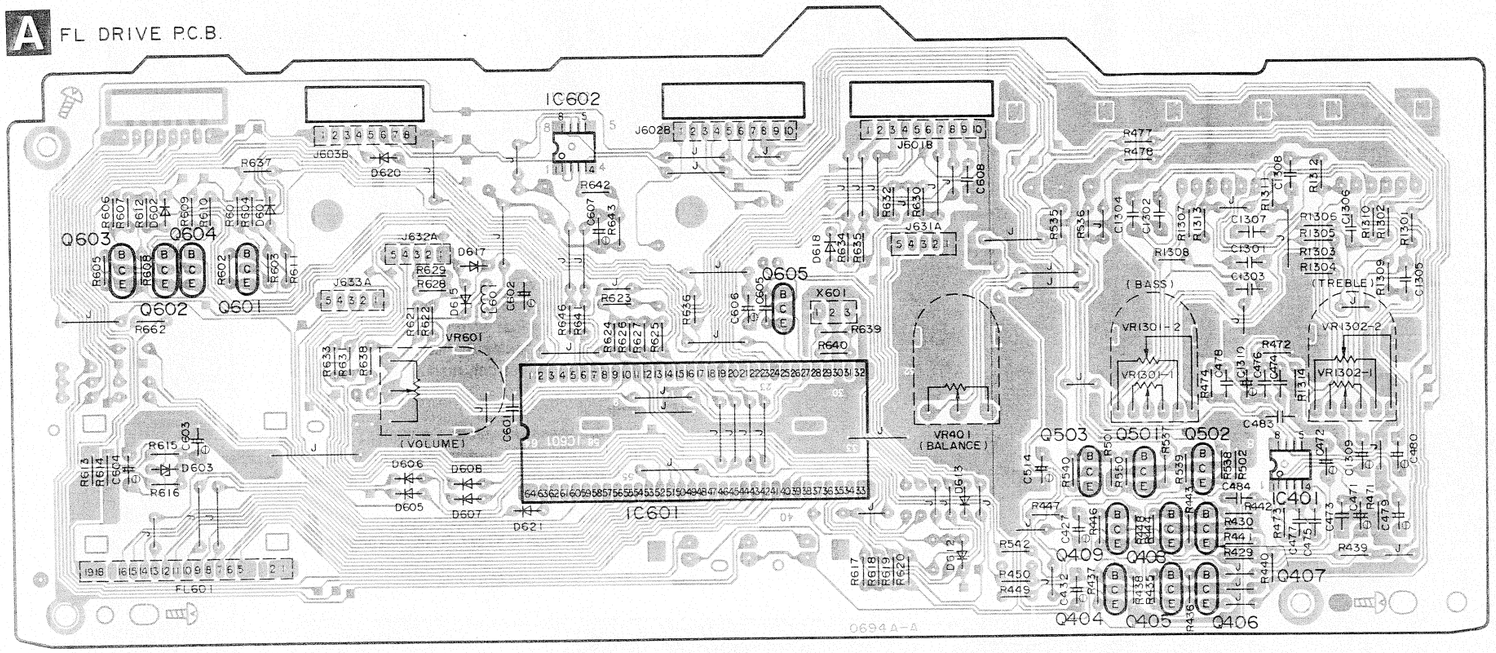


Power Source Circuit For [GN] area.

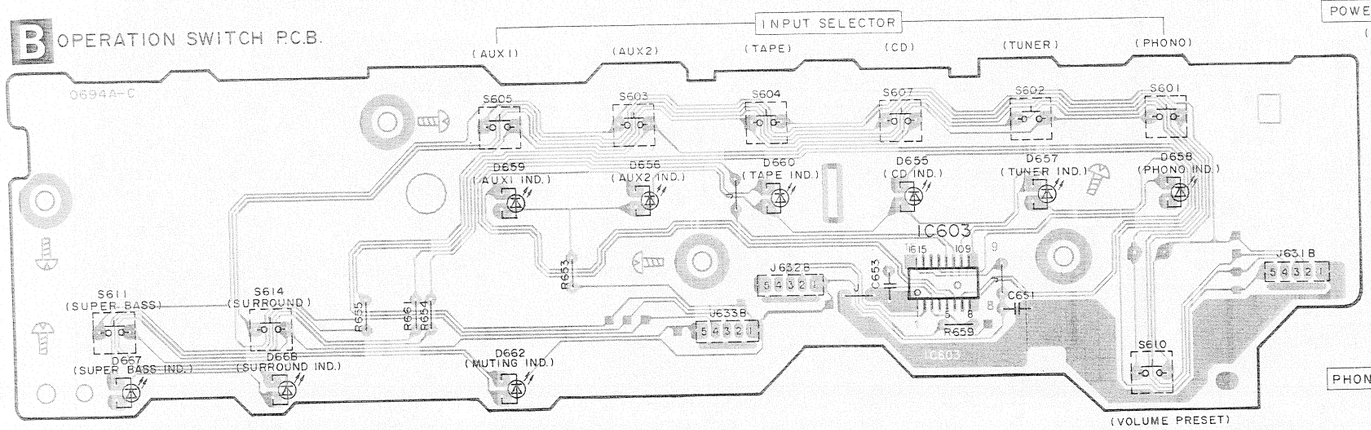


■ CIRCUIT BOARD DIAGRAM

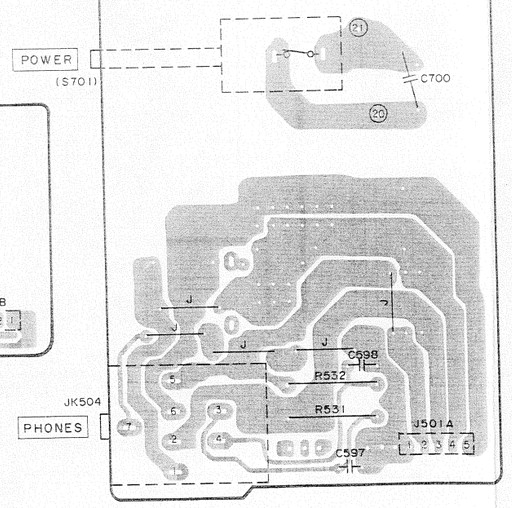
A FL DRIVE P.C.B.



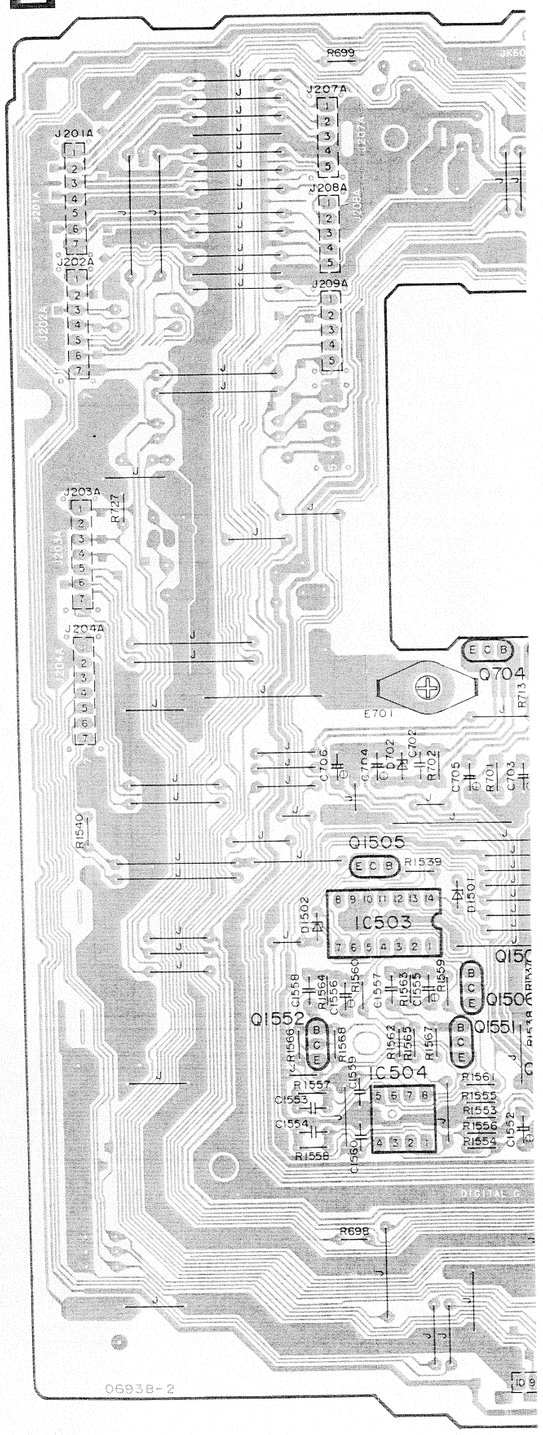
B OPERATION SWITCH P.C.B.



F POWER SWITCH/HEADPHONES P.C.B.

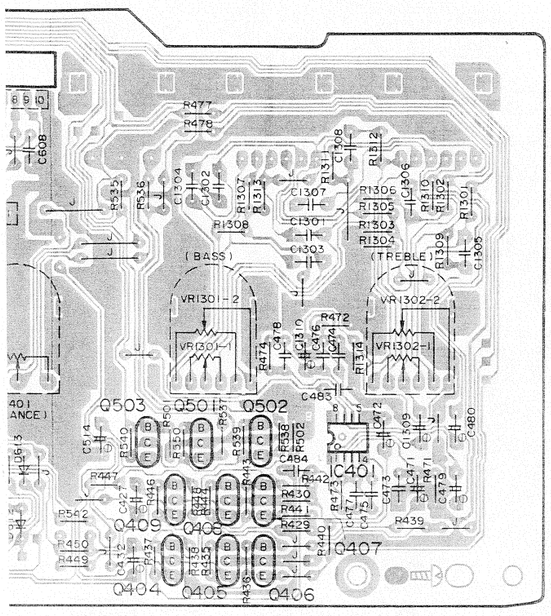


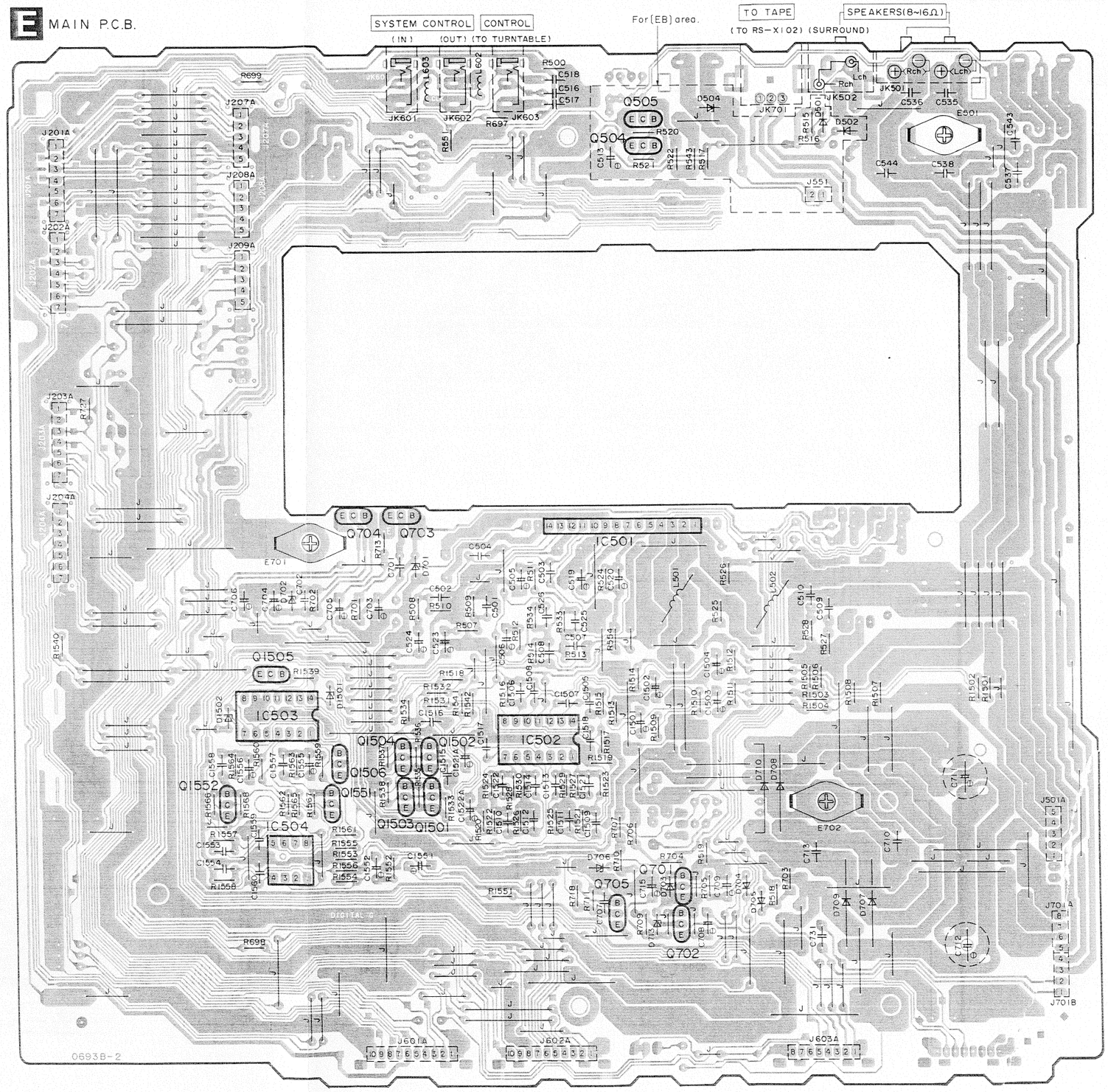
E MAIN P.C.B.



5 6 7 8 9 10 11 12 13 14

E MAIN P.C.B.




SYSTEM CONTROL
(IN)
CONTROL
(OUT) (TO TURNTABLE)
For (EB) area.
TO TAPE
(TO RS-X102) (SURROUND)
SPEAKERS(8~16Ω)
JK601
JK602
JK603
L603
L602
R500
C518
C516
C517
R699
R697
R55
Q505
Q504
D504
D502
JK701
JK502
JK501
C536
C535
E501
C544
C538
C543
C537
J551
R520
R521
R522
R543
R517
R515
R516
C513
J201A
J202A
J207A
J208A
J209A
J203A
J204A
R727
E701
Q704
Q703
IC501
L501
L502
R526
C510
C509
R528
R527
C504
C505
C506
C503
C519
C520
R524
R511
R534
C525
R533
R554
R507
R509
R508
R510
C501
C502
C523
C524
R512
R1540
Q1505
R1539
IC503
IC502
IC504
Q1504
Q1502
Q1506
Q1551
Q1552
Q1503
Q1501
R1518
R1532
R1533
R1534
R1542
R1541
R1543
R1516
R1517
C1516
C1517
C1502
C1507
C1508
C1506
R1514
R1515
R1513
R1518
R1519
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C1585
C1586
C1587
C1588
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C1590
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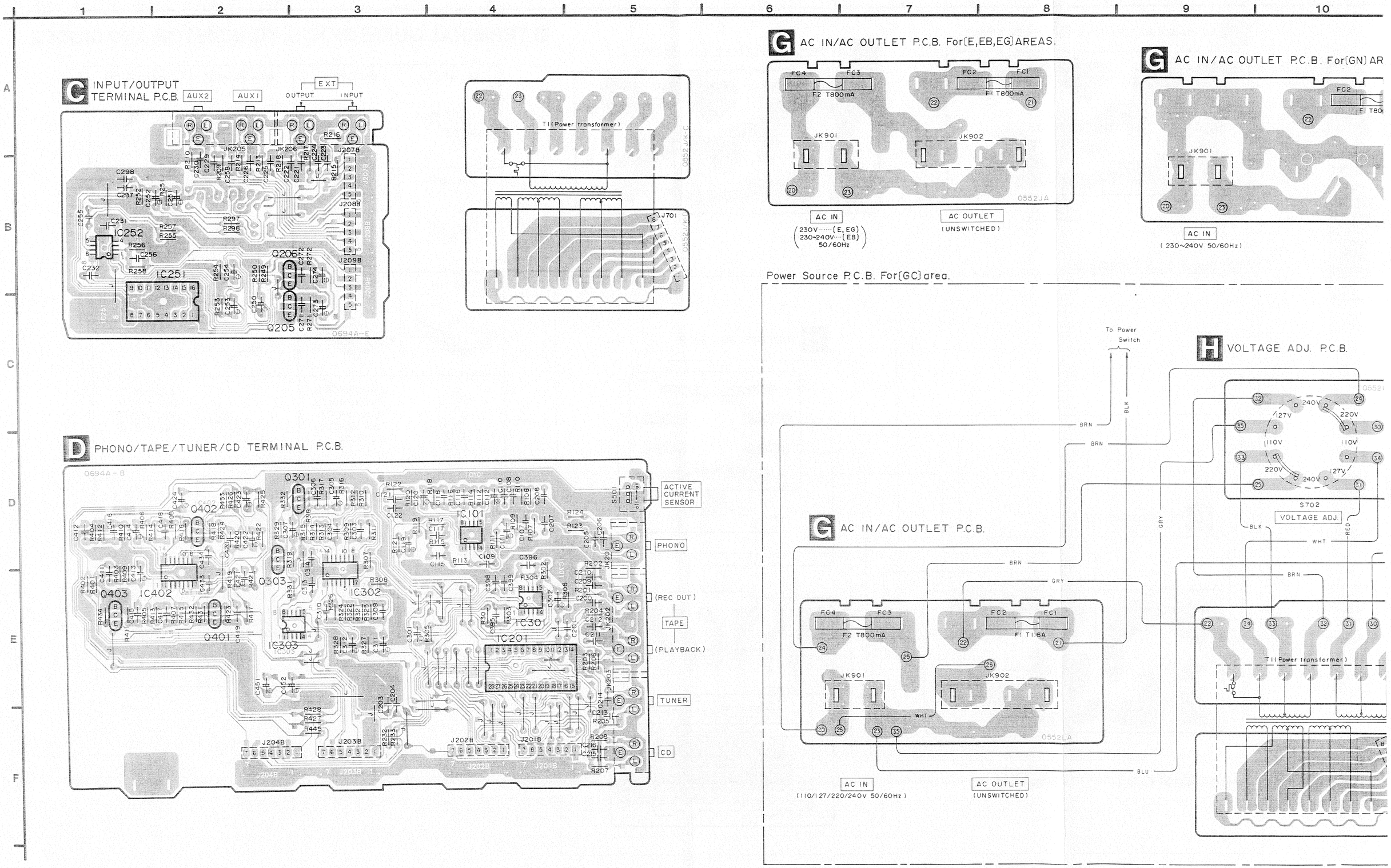
C1592
C1593
C1594
C1595
C1596

CIRCUIT BOARD DIAGRAM



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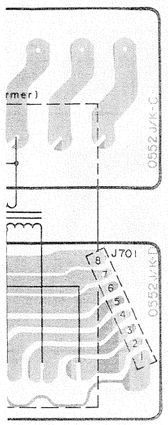
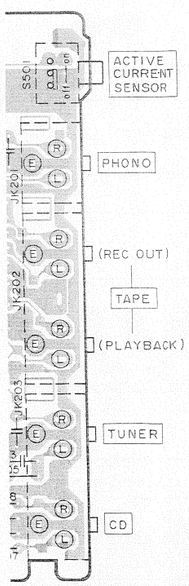
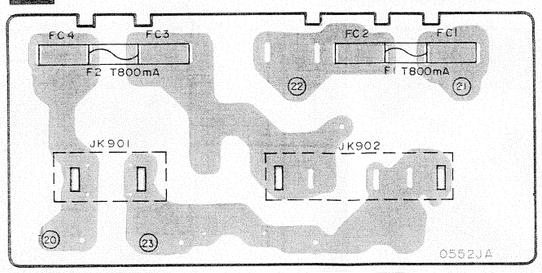
5 6 7 8 9 10 11 12 13 14





G AC IN/AC OUTLET P.C.B. For[E,EB,EG]AREAS.



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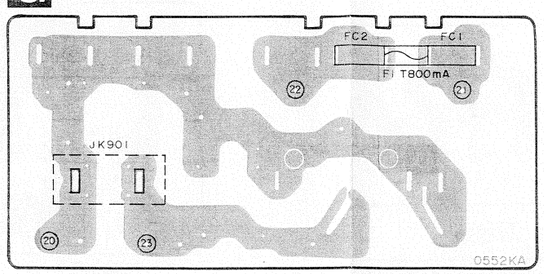
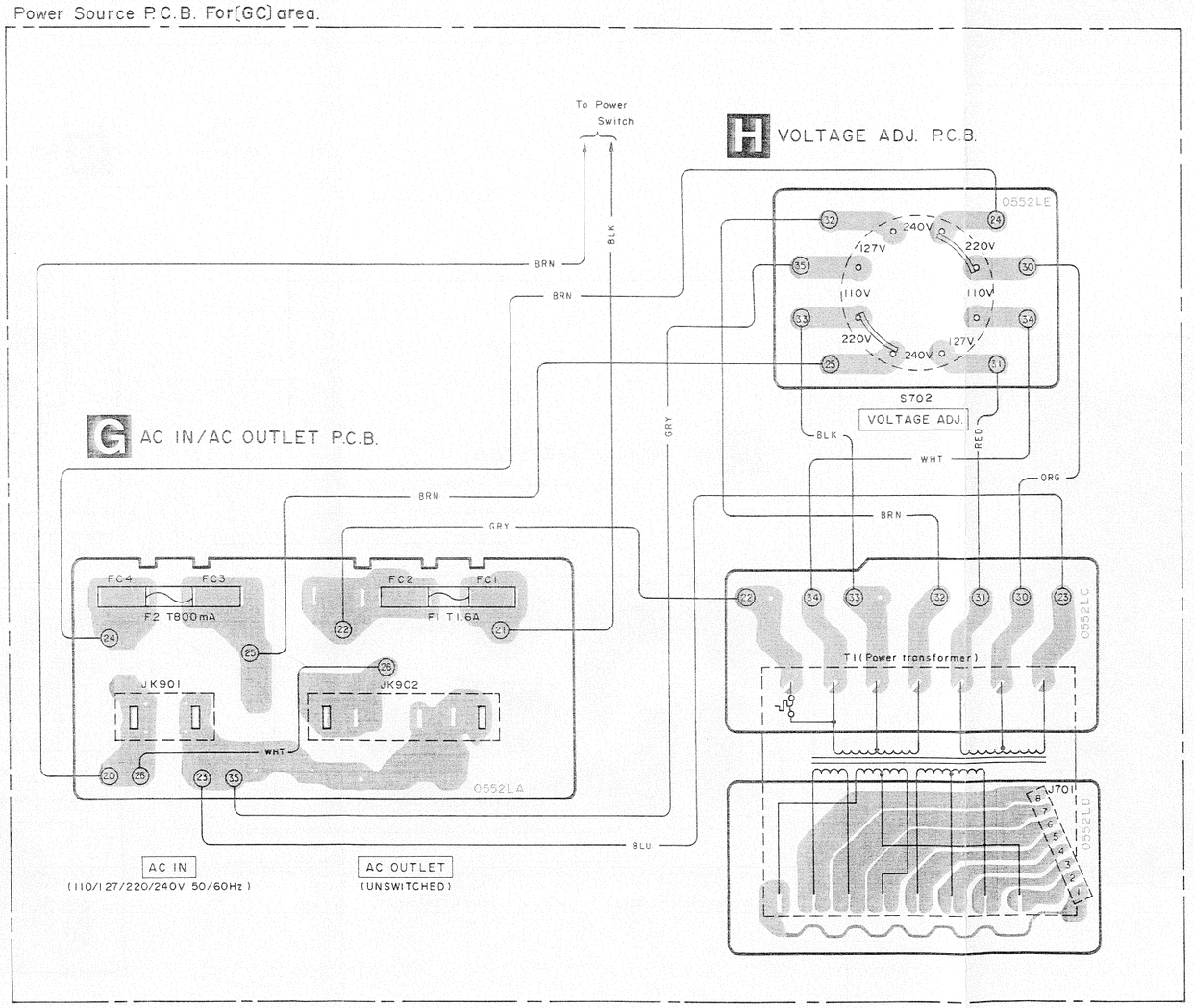
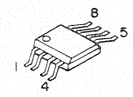
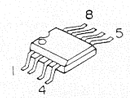
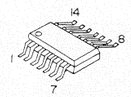
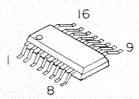
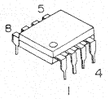
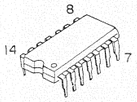
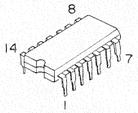
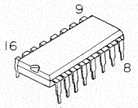
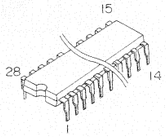
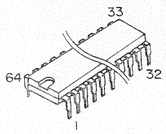
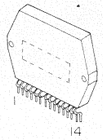
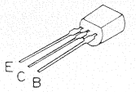
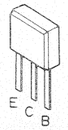
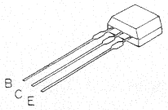
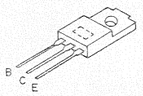
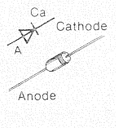
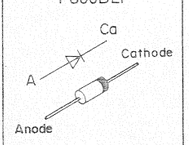
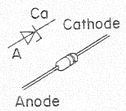
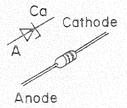
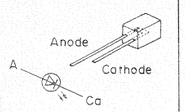


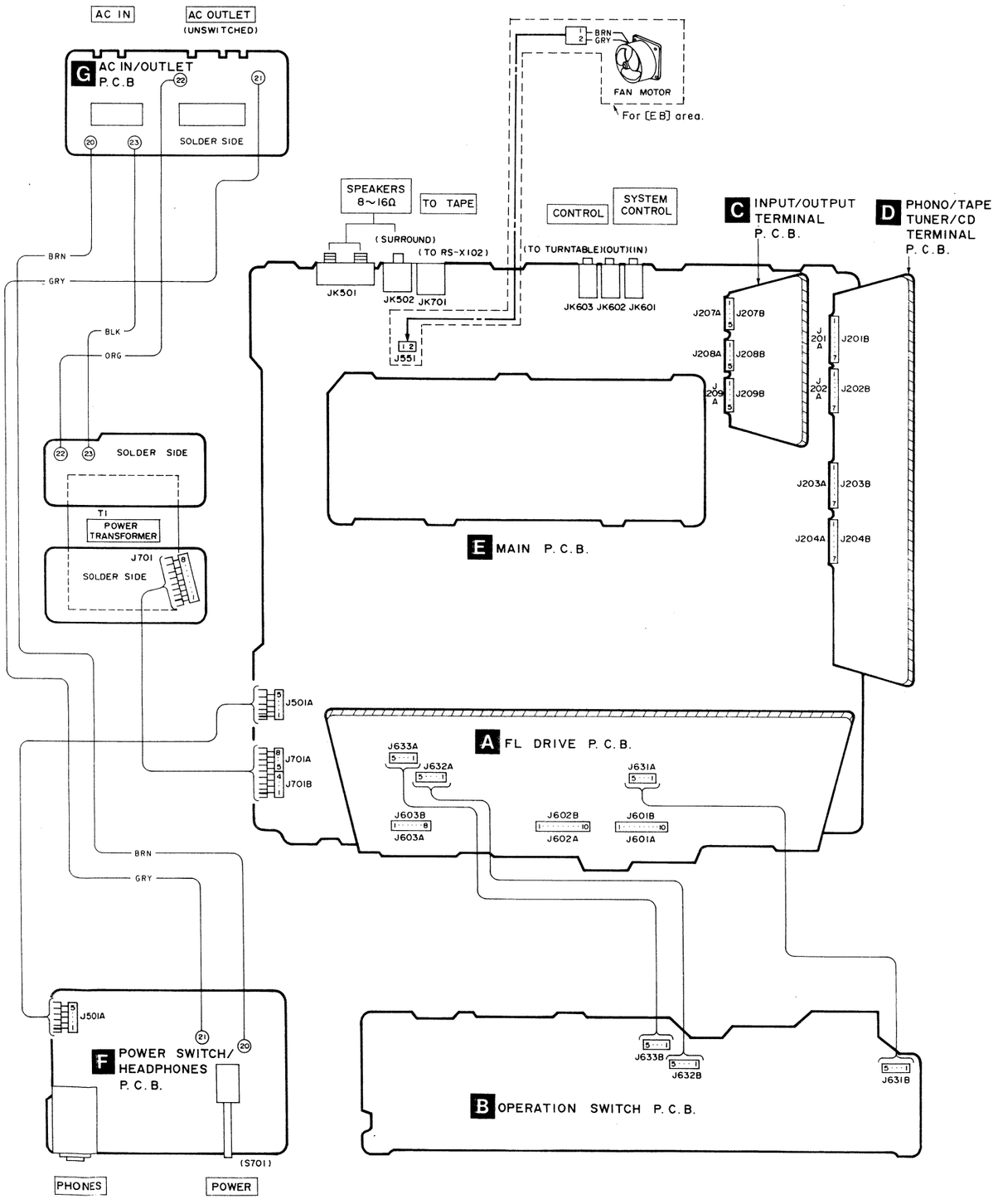
Power Source P.C.B. For[GC]area.



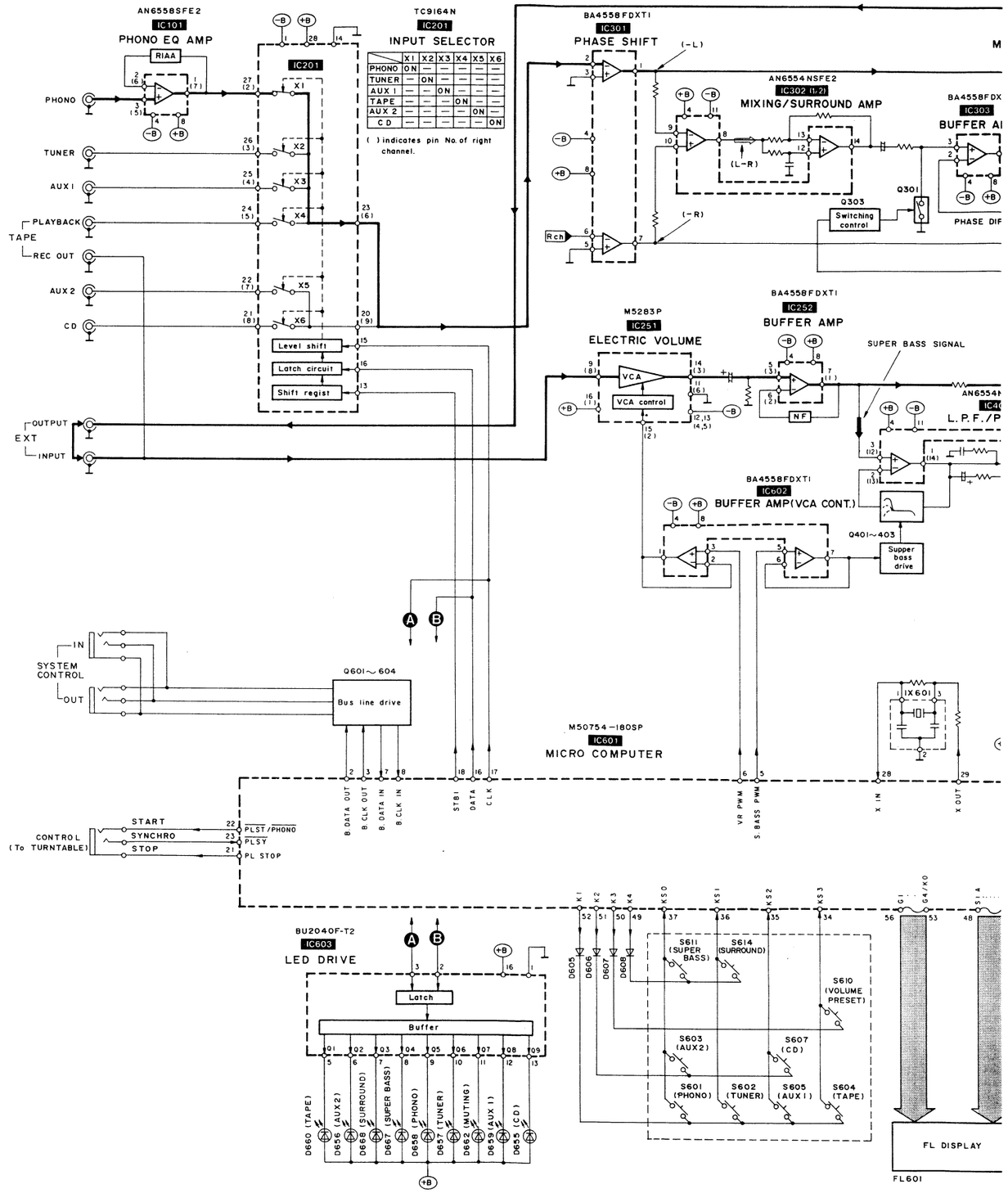
■ TERMINAL GUIDE OF IC'S, TRANSISTOR AND DIODES

AN6558SFE2 	BA4558FDXT1 	AN6554NSFE2 	BU2040F-T2 
M5218AP 	AN6554F 	TC4066B 	M5283P 
TC9164N 	M50754-180SP 	SVI3102C 	2SB621AQRSTA KSD471ACYGTA 
	2SA1309AQSTA 2SC3311AQSTA 2SC3312RSTA 2SD1450STTA UN4215TA		2SD2144STA DTA114ESTP DTC114ESTP DTC144ESTP
2SB1187DEF 2SD1761DEF 		MA165TA MA167TA MA700TA 1SS291TA	P300DLF 
MA4150MTA MA4240MTA 		MA4047MTA MA4051MTA MA4062HTA MA4082MTA	LN873RP-C 

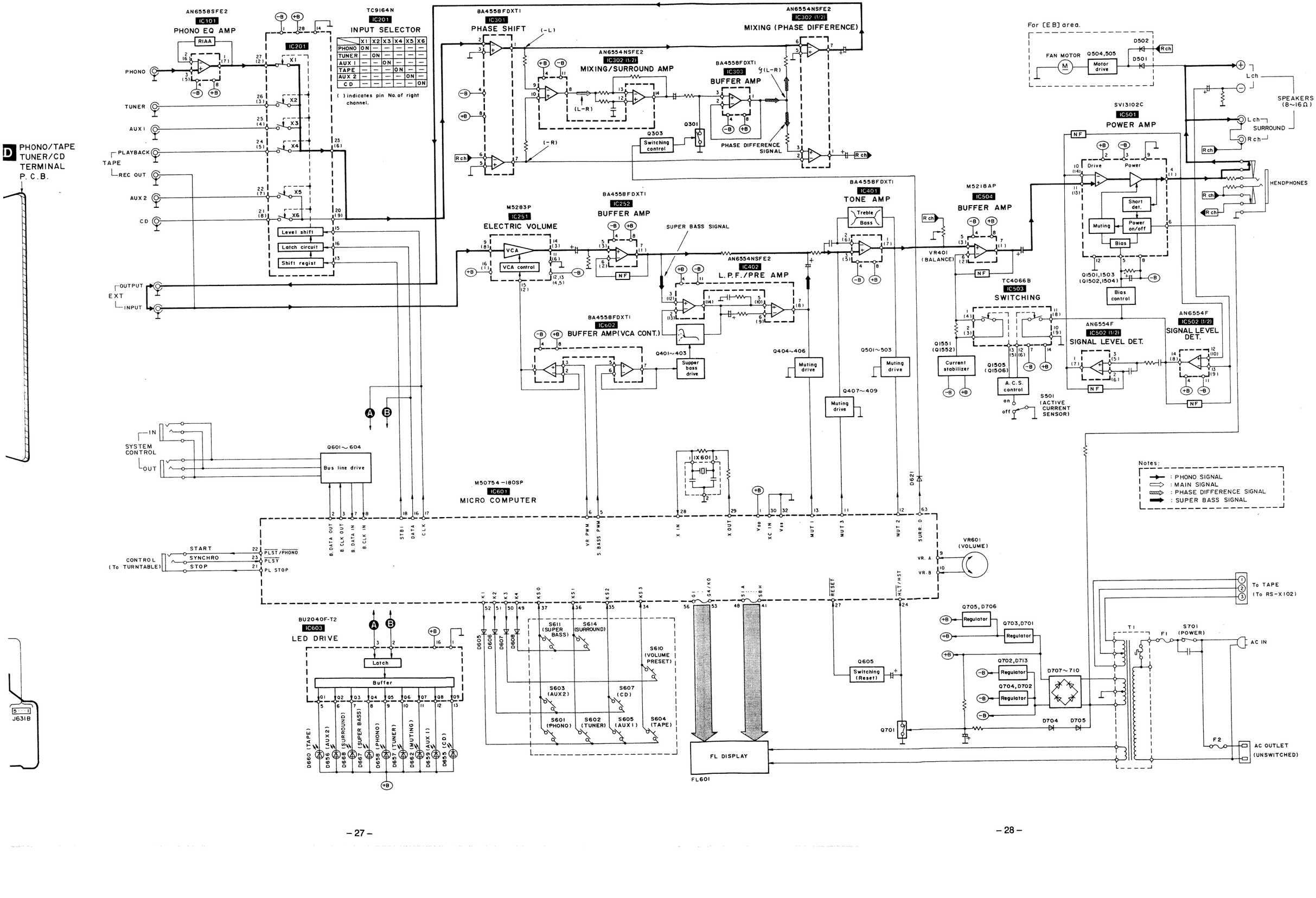
■ WIRING CONNECTION DIAGRAM



■ BLOCK DIAGRAM



■ BLOCK DIAGRAM



■ FUNCTIONS OF IC TERMINALS

•IC601 (M50754-180SP: MICRO COMPUTER)

Pin No.	Symbol	I/O	Function Description
1	VDD	—	To be connected to a power supply (+5 V).
2	B.DATA OUT	O	This is the output terminal for the bus data signal.
3	B.CLK OUT	O	This is the output terminal for the bus block signal.
5	S.BASS PWM	O	This is the output terminal for the super bass control signal.
6	VR PWM	O	This terminal outputs the signal for the control of the volume.
7	B.DATA IN	I	This is the input terminal for the bus data signal.
8	B.CLK IN	I	This is the input terminal for the bus clock signal.
9	VR A	I	These are the terminals for the rotary encoder of the volume of VR601.
10	VR B		
11	MUT 3	O	Outputs the −6 dB signal for control of attenuated muting.
12	MUT 2		
13	MUT 1	O	Output the signal for the control of muting.
15	REC M	O	Output the signal for muting the VTR 1 recording.
16	DATA	O	These are output terminal for data and clock signals.
17	CLK		
18	STB 1	O	The serial data inputted into IC201 is latched by the STB pulse and the switch is set to ON according to data.
19	DATA 2	O	These are output terminal for data and clock signals.
20	CLK 2		
21	PLSTOP	I	These are the terminals for sync recording on the player.
22	$\overline{\text{PLST}}$/$\overline{\text{PHONO}}$	O	
23	$\overline{\text{PLSY}}$	I	
24	$\overline{\text{HLT}}$/.HST	I	This is the terminal for the detection of power supply.
25	KS4	I	This is the key scan terminal.
27	$\overline{\text{RESET}}$	I	This is the input terminal for the reset signal.
28	X IN	I	These are the I/O terminals for the oscillating clock signal.
29	X OUT	O	
34 ~ 37	KS 3 ~ KS 0	I	These are the key scan terminals.
41 ~ 48	S8 ~ S1	O	There terminals output signals for the control of the FL display.
49 ~ 56	G5/K4 ~ G1/K0		
63	SURR.D	O	This is the output terminal for the surround signal.

■ REPLACEMENT PARTS LIST

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
• The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	AN6558SFE2	I. C, PHONO EQ AMP	
IC201	TC9164N	I. C, INPUT SELECTOR	
IC251	M5283P	I. C, ATTENUATOR	
IC252	BA4558FDXT1	I. C, BUFFER AMP	
IC301	BA4558FDXT1	I. C, PHASE SHIFT	
IC302	AN6554NSFE2	I. C, MIXING/SURROUND AMP	
IC303	BA4558FDXT1	I. C, BUFFER AMP	
IC401	BA4558FDXT1	I. C, TONE AMP	
IC402	AN6554NSFE2	I. C, L. P. F/PRE AMP	
IC501	SVI3102C	I. C, POWER AMP	
IC502	AN6554F	I. C, SIGNAL LIVEL DET.	
IC503	TC4066B	I. C, SWITCHING	
IC504	M5218AP	I. C, BUFFER AMP	
IC601	M50754-180SP	I. C, MICRO COMPUTER	
IC602	BA4558FDXT1	I. C, BUFFER AMP	
IC603	BU2040F-T2	I. C, LED DRIVE	
		TRANSISTOR(S)	
Q205	2SC3311A-Q	TRANSISTOR	
Q206	2SA1309A-R	TRANSISTOR	
Q301	2SD2144S	TRANSISTOR	
Q303	DTA114ESTP	TRANSISTOR	
Q401, 402	2SD2144S	TRANSISTOR	
Q403	DTA114ESTP	TRANSISTOR	
Q404	DTA114ESTP	TRANSISTOR	
Q405-408	2SD2144S	TRANSISTOR	
Q409	2SA1309A-R	TRANSISTOR	
Q501, 502	2SD1450STTA	TRANSISTOR	
Q503	2SA1309A-R	TRANSISTOR	
Q504	2SC3311AQSTA	TRANSISTOR	(EB)
Q505	2SA1309AQSTA	TRANSISTOR	(EB)
Q601	2SC3311A-Q	TRANSISTOR	
Q602	DTC144EKT96	TRANSISTOR	
Q603	2SC3311A-Q	TRANSISTOR	
Q604	DTC144EKT96	TRANSISTOR	
Q605	DTC114ESTP	TRANSISTOR	
Q701	UN4215	TRANSISTOR	
Q702	2SB621A-R	TRANSISTOR	
Q703	2SD1761DEF	TRANSISTOR	
Q704	2SB1187DEF	TRANSISTOR	
Q705	KSD471ACYGTA	TRANSISTOR	
Q1501-1504	2SA1309A-R	TRANSISTOR	
Q1505	DTC114ESTP	TRANSISTOR	
Q1506	DTA114ESTP	TRANSISTOR	
Q1551, 1552	2SC3312RSTA	TRANSISTOR	
		DIODE(S)	
D501, 502	MA167TA	DIODE	(EB)
D504	MA4051MTA	DIODE	(EB)
D601, 602	MA700	DIODE	
D603	MA4047MTA	DIODE	
D605-608	MA165	DIODE	
D612, 613	MA165	DIODE	
D615	1SS291TA	DIODE	
D617, 618	MA165	DIODE	
D620, 621	MA165	DIODE	
D655-660	LN873RP-C	LED	
D662	LN873RP-C	LED	
D667, 668	LN873RP-C	LED	
D701, 702	MA4150M	DIODE	
D703	MA165	DIODE	
D704, 705	MA167	DIODE	
D706	MA4062-H	DIODE	
D707-710⚠	P300DLF	DIODE	
D713	MA4240H	DIODE	
D1501, 1502	MA4082MTA	DIODE	
		VARIABLE RESISTOR(S)	
VR401	EWHFDAF20G15	V. R	
VR601	EVQWQAF2524B	V. R	
VR1301, 302	EWC2XAF20C15	V. R	
		COIL(S)	
L501, 502	SLQY07G-40	COIL	
L601	ELEXT100KA9	COIL	
L602, 603	RLQZP101KT-Y	COIL	
		TRANSFORMER	
T1 ⚠	RTP1M5E008-V	POWER TRANSFORMER	(E, EG)
T1 ⚠	RTP1M5B002-V	POWER TRANSFORMER	(EB, GN)
T1 ⚠	RTP1M5G002-V	POWER TRANSFORMER	(GC)
		OSCILLATOR(S)	
X601	EF0GC6004T4	CERAMIC FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
		DISPLAY TUBE	
FL601	RSL0074-F	DISPLAY TUBE	
		FUSE (S)	
F1 ⚠	XBA2C08TB0	FUSE	
F1 ⚠	XBA2C16TB0	FUSE	(GC)
F2 ⚠	XBA2C08TB0	FUSE	(E, EB, EG)
		SWITCH (ES)	
S501	RSS2B006-M	SW, ACTIVE CURRENT SENSOR	
S601	EVQ21405R	SW, SPEAKER ON/OFF	
S602	EVQ21405R	SW, TUNER	
S603	EVQ21405R	SW, AUX 2	
S604	EVQ21405R	SW, TAPE	
S605	EVQ21405R	SW, AUX 1	
S607	EVQ21405R	SW, CD	
S610	EVQ21405R	SW, VOLUME PRESET	
S611	EVQ21405R	SW, SUPER BASS	
S614	EVQ21405R	SW, SURROUND	
S701 ⚠	ESB8249V	SW, POWER	
S702 ⚠	ESE37263	SW, VOLTAGE SELECTOR	(GC)
		CONNECTOR	
J201A	RJU060G07T	SOCKET	
J202A	RJU060G07T	SOCKET	
J203A	RJU060G07T	SOCKET	
J204A	RJU060G07T	SOCKET	
J207A	RJU060G05T	SOCKET	
J208A	RJU060G05T	SOCKET	
J209A	RJU060G05T	SOCKET	
J501A	RJS1A1705	CONNECTOR (5P)	
J551	SJT3213	CONNECTOR	(EB)
J601A	RJU003KD10M1	SOCKET (10P)	
J602A	RJU003KD10M1	SOCKET (10P)	
J603A	RJU003KD08M1	SOCKET (8P)	
J631A	SJT30549BB1	CONNECTOR	
J632A	SJT30549BB1	CONNECTOR	
J633A	SJT30549BB1	CONNECTOR	
J701A	RJS1A1704	SOCKET (4P)	
J201B	RJT060B07	CONNECTOR	
J202B	RJT060B07	CONNECTOR	
J203B	RJT060B07	CONNECTOR	
J204B	RJT060B07	CONNECTOR	
J207B	RJT060B05	CONNECTOR	
J208B	RJT060B05	CONNECTOR	
J209B	RJT060B05	CONNECTOR	
J601B	RJT003KD10M1	CONNECTOR (10P)	
J602B	RJT003KD10M1	CONNECTOR (10P)	

Ref. No.	Part No.	Part Name & Description	Remarks
J603B	RJT003K008M1	CONNECTOR (8P)	
J631B	SJS50581BB	SOCKET (5P)	
J632B	SJS50581BB	SOCKET (5P)	
J633B	SJS50581BB	SOCKET (5P)	
J701B	RJS1A1704	SOCKET (4P)	
		JACK (S)	
JK201	SJF3068N	TERMINAL, PHONO	
JK202	SJF3069-5N	TERMINAL, TAPE	
JK203	SJF3069N	TERMINAL, TUNER/CD	
JK205	SJF3069-5N	TERMINAL, AUX 1/2	
JK206	SJF3069N	TERMINAL, EXT OUT/IN	
JK501	RJR0054M	TERMINZL, SPEAKER	
JK502	SJF3068-4N	TERMINAL, SURROUND	
JK504	SJJ145A-1	JACK, HEADPHONES	
JK601	RJJ33T01	SYNCHRO, SYSTEM CONT. IN	
JK602	RJJ33T01	SYNCHRO, SYSTEM CONT. OUT	
JK603	RJJ33T01	SYNCHRO, CONTROL TO TURNTABL	
JK701	RJS1A0203-0	CONNECTOR, TAPE	
JK901 ⚠	SJS9231-1B	AC INLET	(E, EB, EG, GC)
JK901 ⚠	SJS9234B	AC INLET	(GN)
JK902 ⚠	SJS9333B	AC OUTLET	(E, EG)
JK902 ⚠	SJS9332B	AC OUTLET	(EB)
JK902 ⚠	SJS9233B	AC OUTLET	(GC)
		FUSE HOLDER	
FC1, 2 ⚠	SJT388	FUSE HOLDER	
FC3, 4 ⚠	SJT388	FUSE HOLDER	(E, EB, EG, GC)

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R107, 108	ERDS2TJ471	1/4W 470
R109, 110	ERDS2TJ473	1/4W 47K
R111, 112	ERDS2TJ331	1/4W 330
R113, 114	ERDS2TJ560T	1/4W 56
R115, 116	ERDS2TJ184T	1/4W 180K
R117, 118	ERDS2TJ123	1/4W 12K
R119, 120	ERDS2TJ224T	1/4W 220K
R121, 122	ERDS2TJ102	1/4W 1K
R123, 124	ERDS2TJ471	1/4W 470
R201, 202	ERDS2TJ472	1/4W 4.7K
R203-206	ERDS2TJ102	1/4W 1K
R207-210	ERDS2TJ822	1/4W 8.2K
R213, 214	ERDS2TJ822	1/4W 8.2K
R215-218	ERDS2TJ102	1/4W 1K
R232, 233	ERDS2TJ272T	1/4W 2.7K
R249	ERDS2TJ103	1/4W 10K
R250	ERDS2TJ223	1/4W 22K
R251, 252	ERDS2TJ473	1/4W 47K
R253, 254	ERDS2TJ183T	1/4W 18K
R255, 256	ERDS2TJ153	1/4W 15K
R257, 258	ERDS2TJ473	1/4W 47K
R271, 272	ERDS2TJ152	1/4W 1.5K
R297, 298	ERDS2TJ182	1/4W 1.8K
R301-304	ERDS2TJ223	1/4W 22K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ332	1/4W 3.3K
R309, 310	ERDS2TJ223	1/4W 22K
R311, 312	ERDS2TJ393	1/4W 39K
R313-315	ERDS2TJ223	1/4W 22K
R316	ERDS2TJ622T	1/4W 6.2K
R317	ERDS2TJ562	1/4W 5.6K
R318	ERDS2TJ123	1/4W 12K
R319	ERDS2TJ224T	1/4W 220K
R321, 322	ERDS2TJ332	1/4W 3.3K
R324	ERDS2TJ332	1/4W 3.3K
R325, 326	ERDS2TJ392T	1/4W 3.9K
R327, 328	ERDS2TJ104	1/4W 100K
R329	ERDS2TJ332	1/4W 3.3K
R331	ERDS2TJ105T	1/4W 1M
R332	ERDS2TJ334	1/4W 330K
R401, 402	ERDS2TJ823T	1/4W 82K
R403, 404	ERDS2TJ683	1/4W 68K
R405, 406	ERDS2TJ393	1/4W 39K
R407, 408	ERDS2TJ333	1/4W 33K
R409, 410	ERDS2TJ103	1/4W 10K
R411, 412	ERDS2TJ332	1/4W 3.3K

Ref. No.	Part No.	Values & Remarks
R413, 414	ERDS2TJ153	1/4W 15K
R415, 416	ERDS2TJ222	1/4W 2.2K
R417, 418	ERDS2TJ221	1/4W 220
R419, 420	ERDS2TJ273	1/4W 27K
R421, 422	ERDS2TJ470	1/4W 47
R423, 424	ERDS2TJ153	1/4W 15K
R425-428	ERDS2TJ152	1/4W 1.5K
R429, 430	ERDS2TJ333	1/4W 33K
R431, 432	ERDS2TJ102	1/4W 1K
R433	ERDS2TJ105T	1/4W 1M
R434	ERDS2TJ334	1/4W 330K
R435, 436	ERDS2TJ102	1/4W 1K
R437	ERDS2TJ105T	1/4W 1M
R438	ERDS2TJ334	1/4W 330K
R439, 440	ERDS2TJ152	1/4W 1.5K
R441, 442	ERDS2TJ222	1/4W 2.2K
R443, 444	ERDS2TJ102	1/4W 1K
R445	ERDS2TJ222	1/4W 2.2K
R446	ERDS2TJ104	1/4W 100K
R447	ERDS2TJ334	1/4W 330K
R448	ERDS2TJ105T	1/4W 1M
R449	ERDS2TJ332	1/4W 3.3K
R450	ERDS2TJ103	1/4W 10K
R471-474	ERDS2TJ334	1/4W 330K
R477, 478	ERDS2TJ102	1/4W 1K
R500	ERDS2TJ100	1/4W 10
R501	ERDS2TJ104	1/4W 100K
R502	ERDS2TJ105T	1/4W 1M
R507, 508	ERDS2TJ222	1/4W 2.2K
R509, 510	ERDS2TJ563	1/4W 56K
R511, 512	ERDS2TJ182	1/4W 1.8K
R513, 514	ERDS2TJ563	1/4W 56K
R515, 516	ERDS2TJ223T	1/4W 22K (EB)
R517	ERDS2TJ563T	1/4W 56K (EB)
R518	ERDS2TJ684	1/4W 680K
R519	ERDS2TJ154	1/4W 150K
R520	ERDS2TJ153T	1/4W 15K (EB)
R521	ERDS2TJ103T	1/4W 10K (EB)
R522	ERDS1FVJ680T	1/2W 68 (EB) ⚠
R524	ERDS2TJ105T	1/4W 1M
R525, 526	ERD25FVJ100T	1/4W 10 ⚠
R527, 528	ERDS1FVJ100T	1/2W 10 ⚠
R531, 532	ERG2SJ331P	2W 330
R533, 534	ERDS2TJ562	1/4W 5.6K
R535-538	ERDS2TJ472	1/4W 4.7K
R539	ERDS2TJ102	1/4W 1K
R540	ERDS2TJ334	1/4W 330K
R542	ERDS2TJ103	1/4W 10K
R543	ERDS1FVJ560T	1/2W 56 (EB) ⚠

Ref. No.	Part No.	Values & Remarks
R550	ERDS2TJ102	1/4W 1K
R551	ERDS2TJ104	1/4W 100K
R554	ERD25FJ470	1/4W 47 ⚠
R601	ERDS2TJ223	1/4W 22K
R602-604	ERDS2TJ393	1/4W 39K
R605	ERDS2TJ223	1/4W 22K
R606-608	ERDS2TJ393	1/4W 39K
R609-612	ERDS2TJ100	1/4W 10
R613	ERDS2TJ120T	1/4W 12
R614	ERDS2TJ150T	1/4W 15
R615, 616	ERDS2TJ151	1/4W 150
R617-620	ERDS2TJ104	1/4W 100K
R621, 622	ERDS2TJ103	1/4W 10K
R623	ERDS2TJ222	1/4W 2.2K
R624	ERDS2TJ332	1/4W 3.3K
R625	ERDS2TJ103	1/4W 10K
R626	ERDS2TJ332	1/4W 3.3K
R627	ERDS2TJ222	1/4W 2.2K
R628	ERDS2TJ332	1/4W 3.3K
R629	ERDS2TJ103	1/4W 10K
R630	ERDS2TJ102	1/4W 1K
R631	ERDS2TJ103	1/4W 10K
R632	ERDS2TJ222	1/4W 2.2K
R633	ERDS2TJ103	1/4W 10K
R634	ERDS2TJ822	1/4W 8.2K
R635	ERDS2TJ393	1/4W 39K
R636	ERDS2TJ332	1/4W 3.3K
R637	ERDS2TJ103	1/4W 10K
R638	ERDS2TJ104	1/4W 100K
R639	ERDS2TJ105T	1/4W 1M
R640	ERDS2TJ102	1/4W 1K
R641	ERDS2TJ223	1/4W 22K
R642	ERDS2TJ103	1/4W 10K
R643	ERDS2TJ105T	1/4W 1M
R646	ERDS2TJ223	1/4W 22K
R653-655	ERDS2TJ331	1/4W 330
R659	ERDS2TJ272T	1/4W 2.7K
R661	ERDS2TJ331	1/4W 330
R662	ERDS2TJ101	1/4W 100
R697-699	ERDS2TJ101	1/4W 100
R701, 702	ERDS1FVJ332T	1/2W 3.3K ⚠
R703	ERD25FJ101	1/4W 100 ⚠
R704	ERDS2TJ473	1/4W 47K
R705	ERDS2TJ103	1/4W 10K
R706	ERDS1FVJ2R2T	1/2W 2.2 ⚠
R707	ERDS1FVJ3R3T	1/2W 3.3 ⚠
R709	ERDS2TJ332	1/4W 3.3K
R710	ERDS1FVJ331T	1/2W 330 ⚠
R711	ERDS2TJ102	1/4W 1K

Ref. No.	Part No.	Values & Remarks
R713	ERDS2TJ2R2T	1/4W 2.2
R718	ERDS1FVJ820T	1/2W 82 ⚠
R727	ERDS2TJ104	1/4W 100K
R1301, 1302	ERDS2TJ102	1/4W 1K
R1303, 1304	ERDS2TJ822	1/4W 8.2K
R1305, 1306	ERDS2TJ223	1/4W 22K
R1307, 1308	ERDS2TJ392T	1/4W 3.9K
R1309, 1310	ERDS2TJ182	1/4W 1.8K
R1311, 1312	ERDS2TJ821	1/4W 820
R1313, 1314	ERDS2TJ333	1/4W 33K
R1501, 1502	ERDS2TJ123	1/4W 12K
R1503, 1504	ERDS2TJ103	1/4W 10K
R1505, 1506	ERDS2TJ101	1/4W 100
R1507, 1508	RREEMKR10VC	2W 0.1
R1509-1512	ERDS2TJ103	1/4W 10K
R1513-1516	ERDS2TJ104	1/4W 100K
R1517, 1518	ERDS2TJ472	1/4W 4.7K
R1519, 1520	ERDS2TJ272T	1/4W 2.7K
R1521-1526	ERDS2TJ563	1/4W 56K
R1527, 1528	ERDS2TJ103	1/4W 10K
R1529, 1530	ERDS2TJ392T	1/4W 3.9K
R1531, 1532	ERDS2TJ223	1/4W 22K
R1533, 1534	ERDS2TJ472	1/4W 4.7K
R1535, 1536	ERDS2TJ223	1/4W 22K
R1537, 1538	ERDS2TJ103	1/4W 10K
R1539	ERDS2TJ333	1/4W 33K
R1540	ERDS2TJ102	1/4W 1K
R1541, 1542	ERDS2TJ752T	1/4W 7.5K
R1551, 1552	ERDS2TJ223	1/4W 22K
R1553, 1554	ERDS2TJ103	1/4W 10K
R1555, 1556	ERDS2TJ562	1/4W 5.6K
R1557, 1558	ERDS2TJ103	1/4W 10K
R1559, 1560	ERDS2TJ273	1/4W 27K
R1561-1564	ERDS2TJ102	1/4W 1K
R1565, 1566	ERDS2TJ123	1/4W 12K
R1567, 1568	ERDS2TJ683	1/4W 68K
		CAPACITORS
C107, 108	ECBT1H101KB5	50V 100P
C109, 110	ECBT1H102KB5	50V 1000P
C111, 112	ECA1EAP330B	25V 33P
C115, 116	ECFR1E223KR	25V 0.022U
C117, 118	ECFR1E682KR	25V 6800P
C119, 120	ECA1HAP010B	50V 1U
C121, 122	ECBT1E103ZF	25V 0.01U
C200	ECBT1E223ZF	25V 0.022U
C201	ECBT1H470J5	50V 47P
C203, 204	ECBT1E103ZF	25V 0.01U
C205, 206	ECBT1H180J5	50V 18P
C207, 208	ECBT1H151KB5	50V 150P
C209-216	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Values & Remarks
C221-226	ECBT1H101KB5	50V 100P
C229, 230	ECBT1H101KB5	50V 100P
C231, 232	ECBT1E103ZF	25V 0.01U
C250	ECEA1CKA220B	16V 22U
C251, 252	ECEA1HKA3R3B	50V 3.3U
C253, 254	ECEA1HKAR47B	50V 0.47U
C255, 256	ECBT1H180J5	50V 18P
C258	ECBT1E223ZF	25V 0.022U
C271, 272	ECBT1H101KB5	50V 100P
C273, 274	ECEA1CKA220B	16V 22U
C297, 298	ECBT1H151KB5	50V 150P
C301, 302	ECA1HAP3R3B	50V 3.3U
C303	ECBT1H680J5	50V 68P
C304	ECQV1H823JZ	50V 0.082U
C305	ECEA1HKA3R3B	50V 3.3U
C306	ECBT1H221KB5	50V 220P
C307	ECEA1HKA3R3B	50V 3.3U
C309, 310	ECBT1H820KB5	50V 82P
C311, 312	ECA1HAP3R3B	50V 3.3U
C313, 314	ECBT1E103ZF	25V 0.01U
C395, 396	ECBT1H120J5	50V 12P
C398, 399	ECBT1E103ZF	25V 0.01U
C411, 412	ECFR1E123KR	25V 0.012U
C413, 414	ECEA1HKAR22B	50V 0.22U
C415, 416	ECFR1E682KR	25V 6800P
C417, 418	ECFR1E272KR	25V 2700P
C419, 420	ECFR1E333KR	25V 0.033U
C421, 422	ECEA1HKA3R3B	50V 3.3U
C423, 424	ECA1HAP100B	50V 10U
C427	ECEA0JKA470B	6.3V 47U
C432	ECEA1CKA100B	16V 10U
C433, 434	ECBT1E103ZF	25V 0.01U
C451, 452	ECEA1CKA220B	16V 22U
C471, 472	ECA1HAP3R3B	50V 3.3U
C473, 474	ECBT1H101KB5	50V 100P
C475, 476	ECBT1H821KB5	50V 820P
C477, 478	ECBT1H680J5	50V 68P
C479, 480	ECEA1HKA3R3B	50V 3.3U
C483, 484	ECBT1E103ZF	25V 0.01U
C501, 502	ECBT1H331KB5	50V 330P
C503, 504	ECBT1H151KB5	50V 150P
C505, 506	ECA1HAP2R2B	50V 2.2U
C507, 508	ECBT1H6R8K5	50V 6.8P
C509, 510	ECKT1H223ZF	50V 0.022U
C513	ECEA1CKA100B	16V 10U (EB)
C514	ECEA0JKA470B	6.3V 47U
C516-518	ECBT1E103ZF	25V 0.01U
C519	ECA1HAP330B	55V 33U
C520	ECA2AAP100B	100V 10U
C523, 524	ECA1HAP3R3B	50V 3.3U
C525, 526	ECBT1H331KB5	50V 330P
C535, 536	ECBT1E223ZF	25V 0.022U

Ref. No.	Part No.	Values & Remarks
C537, 538	ECBT1H102KB5	50V 1000P
C543, 544	ECBT1H102KB5	50V 1000P
C597, 598	ECBT1H102KB5	50V 1000P
C601	ECBT1E103ZF	25V 0.01U
C602	ECEA0JU102	6.3V 1000U
C603	ECEA1HKA3R3B	50V 3.3U
C604	ECEA1VKA100B	35V 10U
C605	ECBT1E103ZF	25V 0.01U
C606, 607	ECEA1HKA010B	50V 1U
C608	ECBT1H101KB5	50V 100P
C651	ECBT1H104ZF5	50V 0.1U
C653	ECBT1H470J5	50V 47P
C700	ECKWNS103ZV	500V 0.01U ⚠
C701	ECBT1H102KB5	50V 1000P
C702	ECKR1H103ZF5	50V 0.01U
C703, 704	ECEA1EKA100B	25V 10U
C705, 706	ECEA1CKA100B	16V 10U
C707	ECBT1E103ZF	25V 0.01U
C708	ECEA1CKA100B	16V 100U
C709	ECEA1HKA2R2B	50V 2.2U
C710	ECBT1E223ZF	25V 0.022U
C711, 712	ECEA1HJ332UB	50V 3300U
C713	ECQE1104KF3	100V 0.1U
C715	ECEA1VKA100B	35V 10U
C731	ECFR1E104ZF5	25V 0.1U
C1301, 1302	ECFR1E123KR	25V 0.012U
C1303, 1304	ECFR1E683KR	25V 0.068U
C1305, 1306	ECFR1E472KR	25V 4700P
C1307, 1308	ECFR1E223KR	25V 0.022U
C1309, 1310	ECA1HAP010B	50V 1U
C1501-1504	ECEA1HKA2R2B	50V 2.2U
C1505, 1506	ECFR1E223KR	25V 0.022U
C1507, 1508	ECBT1H820KB5	50V 82P
C1509-1512	ECFR1E104KR	25V 0.1U
C1513, 1514	ECBT1H331KB5	50V 330P
C1515, 1516	ECBT1C103MS5	16V 0.01U
C1517, 1518	ECBT1E103ZF	25V 0.01U
C1521A	ECA1HAP2R2B	50V 2.2U
C1521	ECBT1H102KB5	50V 1000P
C1522A	ECA1HAP2R2B	50V 2.2U
C1522	ECBT1H102KB5	50V 1000P
C1551, 1552	ECA1HAP3R3B	50V 3.3U
C1553, 1554	ECBT1H151KB5	50V 150P
C1555, 1556	ECEA1HKA2R2B	50V 2.2U
C1557, 1558	ECQV1H124JZ3	50V 0.12U
C1559, 1560	ECBT1E103ZF	25V 0.01U